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ABSTRACT

The study was designed to evaluate the acceptance, appropriateness, and use of an experimental Spanish edition of the April 1980 "Ranger Rick's Nature Magazine"; to identify similarities and differences in the reactions to the translated edition of various groups within the Hispanic population; and to collect the recommendations for the Spanish edition from the field test groups. Researchers used a mail questionnaire to survey 2,734 students in 119 classes in grades 4-8 in 17 sites in 7 states, and conducted observations and on-site interviews with a subsample of students and teachers. The respondents represented three major Hispanic groups (Mexican Americans, Cubans, Puerto Ricans) in various socioeconomic groups, from different types of communities (urban, suburban, and rural), and with varying degrees of Spanish and English proficiency. Acceptability and use of the Spanish edition was generally high among students and staff, although the vocabulary level was difficult for younger students. Respondents considered the content, format, and translation to be of exceptionally high quality and most students in all sites wanted to continue receiving the magazine. Results indicated that the approach represented by the Spanish edition had merit, served many pressing educational needs, and should be pursued further. (Author/SE)

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RESEARCH REPORT

SPANISH TRANSLATION AND FEASIBILITY STUDY OF RANGER RICK'S NATURE MAGAZINE

Final Report

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RC014753

Educational Testing Service
Princeton, New Jersey

Spanish Translation and Feasibility Study
# of Ranger Rick's Nature Magazine

Final Report

Virginia C. Shipman
Educational Testing Service
Princeton, New Jersey

Prepared for: National Wildlife Federation, the prime grantee, under NSF Award SED-8019334.

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September 30, 1982

Spanish Translation and Feasibility Study
# of Ranger Rick's Nature Magazine

ABSTRACT

The present study represented the interests of the National Science Foundation, The National Wildlife Federation and Educational Testing Service in instructional materials for students of Hispanic background with limited English language proficiency. The study was designed to (a) evaluate the acceptance, appropriateness, and use of an experimental Spanish edition of Ranger Rick's Nature Magazine; (b) identify similarities and differences in reaction by diverse groups within the Hispanic population; and (c) collect and analyze recommendations from the field test sample for the Spanish edition program materials and services. The findings were based on a large nationwide sample of students that varied on the following characteristics: Hispanic origin (Mexican American, Puerto Rican, and Cuban), type of community (urban, suburban, and rural), family socioeconomic status, grade level (four through eight), and level of Spanish and English proficiency. Information also was provided by school administrative and teaching staff. Data were collected by mailed questionnaires and by both interviews and observation at a sample of the study sites. The results indicated that the approach represented by the Spanish edition of Ranger Rick has merit, well serves a variety of pressing educational needs and should be pursued further. Acceptance of the magazine was high for the various ethnic groups represented. Variability within sites, however, reflected differences in students' Spanish competencies, teachers' attitudes and skills, and the particular sociocultural context.

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PREFACE

The National Wildlife Federation (NWF), founded in 1936, is the largest nongovernmental organization devoted to conservation education, with 53 affiliate organizations and over four and a half million members. Its commitment is to a balanced ecology and prudent use of natural resources. To that end, it numbers among its educational programs a monthly publication for children, *Ranger Rick's Nature Magazine*, and the companion *Activity Guide*. The quality of the magazine, both in content and in appearance, has earned for NWF a devoted clientele of parents and educators as well as young readers.

The National Science Foundation (NSF) supports developmental projects that are designed to increase the quality and diversity of science education.[1] With notable awareness of the importance of attracting the interest of students to the sciences early, NSF fosters the development of an appreciation for and adoption of scientific principles as a personal life-style as well as the exploration of careers in the sciences.

In the interest of making sure that young people with no or limited English language proficiency are able to share these opportunities in personal development and career options, the Federation conceived a project to issue the *Ranger Rick* magazines in languages other than English. The first was to be in Spanish since that is the primary language of the fastest growing minority student group. A request to NSF for support and to Educational Testing Service (ETS) for a field-based evaluation resulted in the project described here. On behalf of ETS and the children who may benefit from the findings and recommendations emerging from this study, our sincerest thanks to the Federation and the Foundation for this opportunity.

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[1] From *Development of science education: Guide to the preparation of proposals.* SE 80-50 Washington, D.C.: National Science Foundation, October 1979.

We acknowledge with gratitude the contribution of administrators, teachers, and students of the schools that participated in the study. Their cooperation is much appreciated especially in light of their graciousness in fitting the study requirements into already busy schedules. We trust the experience was a rewarding one.

Special thanks are due to members of ETS whose professional expertise and experience in education were most valuable at critical points in the study: María Santiago Mercado, Valentina Flores, Protase Woodford, and staff at the ETS regional offices in Los Angeles, California, and Austin, Texas.

Two major responsibilities for the study were in the capable hands of Mary Totten who made sure that materials were sent to the study sites and the returns carefully coded and tabulated. In addition, she processed the numerous communications and versions of documents including preliminary versions of this report. Her tireless good humor and her commitment to the purposes and outcomes of this project have earned our sincerest admiration and appreciation.

Special thanks are due to the ETS Wood Hall and Conant Hall text processing staff for their patience and ability to work efficiently and accurately under considerable pressure and difficult conditions.

Finally, we are most grateful to Virginia King and Frieda Hardy for the quality of their assistance and the warmth of their personal support in production of this final report.

Arleen S. Barron
Project Director

Virginia C. Shipman
Senior Research Psychologist

INTRODUCTION

The numbers of school-age children who lack mastery of the English language, one of the major educational problems, continue to increase dramatically. It is unfortunate, therefore, that good instructional material for students who are not English-dominant is still so scarce.

There are several major philosophies about best solutions with the most prominent of these the advocacy, on the one hand, of using native language instruction to foster academic growth in substantive courses with development of English proficiency as a separate but concurrent program, and on the other hand, of using intensive immersion in English for formal education. A third approach views concurrent maintenance of the first language capability as a future benefit to self and society. Regardless of which philosophy one advocates, however, the need for diverse instructional material remains. The interest of the National Wildlife Federation in developing materials for students with no or limited English ability is, therefore, particularly laudable, and Educational Testing Service (ETS) is pleased to have been a part of the project.

The project had as its purpose a limited field tryout of a translation of a single issue of the Ranger Rick's Nature Magazine to test the acceptance and educational potential as judged by students and school personnel. The magazine includes a diverse array of stories of fact and fantasy, discussion questions, games, and numerous colored photographs and illustrations to disseminate knowledge about science and an appreciation of nature. Because the largest group of non-English speakers is Hispanic, Spanish was chosen for this field test. The proposed project received favorable review and financial support from the National Science Foundation.

The project had three major components: translation and production of the Spanish issue, marketing survey, and field test in selected schools with large Hispanic student populations. For the first, ETS assisted with review of the translation by professional staff who are native Puerto Rican and Mexican American, making recommendations related to readability with attention to the use of terms and expressions that are universally understood rather than only in the local idiom. ETS took no part in the market survey.

The field test was designed to achieve the educational purposes of the project:

- to evaluate the acceptance and use of an experimental Spanish edition of Ranger Rick's Nature Magazine and the companion Activity Guide in English.
- to identify the degree to which diverse groups within the Hispanic community react differently to the edition.
- to assess and analyze the extent to which the edition's content, reading level, format, and so on are appropriate for the intended audiences.
- to collect and analyze recommendations from the field-test populations for the Spanish edition program materials and services.

For this field test, ETS conducted a survey by mail in selected school districts that were representative of the geographical regions, the three major Hispanic populations (Mexican American, Puerto Rican, and Cuban), and types of locality (urban, suburban, small town, and rural). Students varied in grade level (four through eight), level of Spanish and English proficiency, and family socioeconomic status. Questionnaires were developed to collect information about relevant demographic characteristics of the respondent, school, and class; prior use and/or familiarity with the magazine; the study experience; perceptions of the magazine's value; and recommendations for change. School staff were instructed to use the magazine for one class period and to complete the questionnaires a week later. We deliberately left the decision about which parts of the magazine to use to the teacher's discretion, feeling that the choice of which part(s) of the magazine and which teaching methodology were used would provide useful information. A sample of schools within these districts was visited for classroom observations and interviews with students, teachers, and administrative staff to gain insights beyond what could be learned by mail and phone.

Since this was a pilot study, emphasis was placed on a qualitative or case study approach to accommodate the richness and variety of student, school, and site characteristics and permit better understanding of the realities of education for students with limited English language ability. Given the interest and cooperation of the schools, it has been possible to identify issues that are common and those that vary from situation to situation. The result is a firm conviction that the approach represented by the Spanish edition of Ranger Rick has merit, will serve a variety of pressing educational needs, and ought to be pursued further.

In the next two chapters which follow there is a description of the procedures used for the ETS-directed activities and a detailed presentation of the findings. The report closes with a statement of conclusions and recommendations based on the field experience. Appendices are included to provide samples of documents used in correspondence and to collect data, and other information that could prove useful in the design of similar studies as well as in understanding this report.

PROCEDURES

The procedures designed to achieve the educational purposes as described above were organized into several major activities. The original plans are described below along with comments on adjustments needed to accommodate particular school district realities and to derive maximum benefit from field input.

I. Translation

ETS' role in translating the Ranger Rick's Nature Magazine was primarily consultation based on experience in education for the student population of concern and in linguistics. The reviewers included both men and women whose native language is Spanish and who represent the two largest groups of Hispanics in this country, Mexican American and Puerto Rican.

At issue is the question of appropriateness. Of course, to be most appealing, the text would come from the local idiom, but this can vary by part of the country, by urban/suburb/rural location, by socioeconomic status, and so on--not very feasible for a national undertaking. The National Wildlife Federation chose very wisely, therefore, to start with a competent translator who produced a technically correct text. This was then reviewed by native Hispanic speakers to make recommendations to simplify the language within the limits of universal acceptance.

Another issue was reading difficulty level. Here the problem is more complex because the level had to accommodate within the study constraints of the use of a single Spanish version issue both the student who is literate in Spanish, even though lacking English language mastery, and the student who is not functionally literate in any language.

Another consideration was whether or not to include in the magazine a glossary of especially difficult or foreign words, or even to include a parallel English text. The decision was to do neither, and the issue is revisited later in the chapters on Results and Conclusions.

As a result, the Spanish version of Ranger Rick was used much as English material is; viz, it was expected that the teacher would provide whatever classroom assistance was necessary for the students to better understand the material, and that the student would seek help as necessary to carry on additional activities outside of school.

The Activity Guide was translated without ETS review since it was intended for use by the teacher for whom the vocabulary and reading level were not expected to pose problems.

The Ranger Rick Student Questionnaire was translated with appropriate reviews so that school staff could provide the students with the version--English or Spanish--they felt the students would be more comfortable using. Most students used the Spanish version and responded in Spanish. A copy of the questionnaire can be found in Appendix A.

The permission letter for parents included a brief description of the project and the option to approve or exclude their child's participation in the study. It also contained a detachable form to be returned to the school. This letter was printed in English on one side and in Spanish on the other to assure, as nearly as possible, informed consent. A copy of this form can be found in Appendix C.

II. Sample

The primary consideration in identifying the field-study sample was representativeness, rather than stratification for a precise match to the characteristics of the national Hispanic student population. The major factors considered were: school achievement levels or socioeconomic status, Hispanic origin, and community characteristics. We were looking, of course, for comparisons of response patterns by site and student characteristics.

Within these general guidelines ETS staff at the Princeton and regional offices identified school districts with large numbers of Spanish language dominant students, that have programs in bilingual education and/or English as a second language (ESL), and where personal contacts could facilitate entry to the schools.

The following describes the characteristics of the sample as originally defined and as represented in the study:

A. Population Sample

1. National origin. The largest Hispanic groups are Puerto Rican and Mexican American (or Chicano). These two groups were, therefore, included from the start, and Cuban students were added in recognition of the large influx of Cuban refugees for whom language fluency and prior academic preparation posed particular problems for adjusting to the American educational system.

   The percentage of Hispanics in the school was thought to be a factor of interest. However, programs for non-English speakers are found almost exclusively in schools with large concentrations of students in need of the program and with only a very few exceptions the study is limited to such schools.

2. Community. The original categorization of inner city, suburban, small town, and rural was maintained. As planned, we also included sites that varied in the extent to which they experienced large numbers of annual Hispanic immigrants. Plans to include classes where Spanish language students were but one of the non-English groups were dropped as inappropriate for this study.

3. School. The sample includes a spread of academic levels as judged by performance on standardized reading tests and/or

head-of-household employment category. In selecting the sample we requested some schools that are at or above the national norm on standardized tests and some that are below. Actual information was collected with the Ranger Rick School Sample Description form (see Appendix A). This form also provided information on the school composition as to grades, size of student enrollment, and percentage of Hispanics.

4. Age-Grade. Originally the plan was to examine three grade clusters: primary or kindergarten through grade 3, middle school grades 4 through 6, and upper elementary/junior high school grades 7 and 8. We were persuaded, however, by the advice of reviewers that little would be gained by inclusion of K-3 students since the content and reading level of the magazine are not geared to this age group. That grade cluster was not, therefore, included in the study.

   The schools usually designated bilingual, ESL, or transitional classes to participate in the study. In some schools these followed traditional grade patterns; e.g., grade 4, grade 5, and so on. However, in quite a few cases there were combinations such as 5 and 6, 7 and 8. Where the combination spanned the categories for aggregating data (e.g., 6 and 7, or 5 through 7), the results are reported in the higher grade category.

5. Geographic Area. As noted above, we were looking for sites with high density populations of students of the three major Hispanic groups, within diverse community type and geographic area. The selection of sites in Bethlehem (Pennsylvania), California,

Chicago, Florida, New Jersey, New York City, and Texas provided the concentration and diversity of students we were seeking.

The original plan had confined the sample to the mainland. However, during a visit with several members of the commission of education in Puerto Rico who were at ETS on other matters, a brief description of the Ranger Rick project generated so much mutual interest that the island was included in the sample.

As originally planned, the sample size was to number 450 classes and 15,000 students in five sites. When the grade K-3 cluster was dropped from the study, the sample was reduced to 426 classes, 14,000 students, and four sites. However, even with persistent effort, it was not possible to obtain the numbers planned. Among the reasons were scheduling conflicts, political considerations, bureaucratic barriers, re-evaluation of the appropriateness of the vocabulary level for the students, mail failures, and so on. Thus, most of the nonparticipants were interested and encouraging but unable to participate at the present time. Only a very few of the schools contacted were not interested because so few, if any, of their 4th- to 8th-grade students required a special bilingual program, or they thought that the use of Spanish materials would interfere with their emphasis on English instruction.

Along with fewer schools than hoped for, there were fewer classes and students within schools than we would have expected. Two major reasons are that some school personnel signed up all classes at the grade levels included in the study (though only some were actually appropriate) and/or participation was by students drawn from several classes rather than by all students in the registered classes. This is due also to the effectiveness of programs at early grades that reduce the numbers of students needing special language programs at grades 4 and above, as well as available bilingual staff. This suggests other uses of a magazine as discussed later in the section on Conclusions. One area where needs for Spanish language materials will continue to be great is in communities that experience continual immigration of non-English speakers.

As indicated earlier, we originally planned to include only five sites, but the reduced number of classes and students than anticipated led to our expanding the number of sites represented. Chance informal discussions at professional meetings led to expressions of interest in participating from educators in Chicago and Bethlehem (Pennsylvania) which we were able to grant. Referrals from participating school administrators to other districts proved to be another valuable referral source.

We were very pleased when staff from the education department in Puerto Rico requested to participate; however, time constraints led to our restricting the present report to the originally planned mainland sample.

Table 1 provides a description of the resulting sample by locality, community type, Hispanic origin, and grade level. A more detailed table is provided in Appendix B. As indicated, the total registered sample comprised seven states, 17 sites, 119 classes, and 2,734 students. These numbers do not include several participating classes whose questionnaires were received too late

TABLE 1

Sample Description According to Site, Community Type, Hispanic Origin, and Grade Level

Site	Urban Suburban	Rural Small Town	Hispanic Origin M.A.	P.R.	Cuban	No. of Schools	No. of Classes	No. of Students 4-6	7-8	Total
California										
Azusa		X	X			2	2		27	27
Calexico		X	X			4	14	359		359
Chula Vista	X		X			1(1)[a]	2(3)	56		56
El Centro		X	X			3	6	89	63	152
Long Beach	X		X			2	4	44		44
Los Angeles	X		X			1(2)	2(5)	43		43
San Francisco	X		X			2	4	25	71	96
San Gabriel	X		X			2	2	19	21	40
Florida										
Miami/Hialeah	X				X	4	14	435		435
Illinois										
Chicago	X			X		8	30	572	164	736
New Jersey										
Union City	X				X	3	8	85	56	141
Vineland		X		X		2	5	61	16	77
New York										
New York City	X			X		5	7	146		146
Pennsylvania										
Bethlehem	X			X		3	3	41		41
Texas										
Ben Bolt		X	X			1	2	7	8	15
San Antonio	X		X			7	11	212	17	229
Weslaco		X	X			1	3	97		97
Total						51	119	2291	443	2734

Notes: a. Number in parentheses indicates additional classes and/or schools for which site visit data are available.

b. Several additional classes and schools participated but no questionnaires were received.

to be included and those where students and/or teachers were interviewed but whose questionnaires were never received.

B. Content. The other important aspect of the sample is, of course, the magazine's substance or content. The Ranger Rick issue chosen for this study was the one of April 1980. There had been some discussion on using an issue featuring Mexico, but it was felt that some of the study respondents would be attracted to the content because of prior experience that was not shared by large numbers of others in the sample. We expected that the results, therefore, would be biased and less useful in making decisions about the magazine's general appeal. The content in the April 1980 issue, as in all issues of Ranger Rick's Nature Magazine, included a diverse array of stories of fact and fantasy, paper and pencil games and puzzles, suggested projects, discussion questions, and numerous colored photographs and illustrations to disseminate scientific knowledge and appreciation for nature.

We deliberately left the decision about which parts of the magazine to use to the teacher's discretion, feeling that the choice of which part(s) of the magazine and which teaching methodology were used would provide useful information. Tables 2 and 3 show the variety in frequency and extent of use of the various articles; the methodology used is discussed in the chapter on Results.

III. Instruments for Data Collection

Instruments were developed to collect information on the classeoom use of the Ranger Rick magazine from three major sources: the school, the teacher, and the student. The topics covered fall into five major categories: relevant demographic information about the respondent, school, and class; prior use and/or familiarity with the magazine; the study experience--factual and respondent perceptions/reactions; perceptions of value of the magazine including interest in continued use; and recommendations for changes. Table 4 lists the items as they relate to these five categories and the three data sources. Copies of the instruments can be found in Appendix A.

TABLE 2

Frequency[a] of Articles Used and Read[b] to Students by Grade Level and Total Group

Article	Grades 4 to 6 (N= 84)		Grades 7 to 8[c] (N= 15)		Total (N= 99)	
	Used	Read	Used	Read	Used	Read
a. April Fooler	30	11	9	2	39	13
b. Search for Supersaurus	70	36	15	5	85	41
c. Backyard Dinosaurs?	57	29	13	4	70	33
d. Build a B[illegible]osaurus	38	14	9	1	47	15
e. Wise Old Owl	29	15	9	1	38	16
f. Ollie Otter's Fun Pages	29	13	10	3	39	16
g. Sense and Nonsense about Hedgehogs	38	21	11	3	49	24
h. Sea Poems	50	26	8	2	58	28
i. Ranger Rick & His Friends	44	18	11	3	55	21
j. Happy Bee	41	13	11	4	52	17
k. Nature Club News	20	5	7	3	27	8
l. Green Velvet Princess	32	13	7	1	39	14
m. Nature Did It First	21	7	7	1	28	8
n. Dear Ranger Rick	20	7	6	2	26	9
o. Ranger Rick's Rare Wonders	28	10	7	1	35	11
p. Diatoms	23	11	7	2	30	13
q. Piper Grows Up	20	6	9	3	29	9

Notes:
- a. Information is incomplete since Teacher Questionnaires were not received for all participating classes and in some cases, the item was omitted. (This occurred for eleven classes in the 4th- to 6th-grade group and for three in the 7th- and 8th-grade group.)
- b. In a few instances, articles were read to the class by students who were more advanced Spanish readers rather than by the teacher.
- c. Totals for grades 7 and 8 include those for any combined group that included students in these grades (e.g., a combined 6th-, 7th-, and 8th-grade class).

TABLE 3

Number[a] of Articles Class Used by Grade Level and Total Group

Number of Articles	Grade Level		
	4 to 6 (N=84)	7 to 8[b] (N=15)	Total (N=99)
1	9	2	11
2	5	-	5
3	7	1	8
4	9	1	10
5	11	-	11
6	6	2	8
7	2	-	2
8	11	-	11
9	3	-	3
10	3	1	4
11	7	-	7
12	-	1	1
13	1	-	1
14	-	2	2
15	-	1	1
16	2	1	3
17	8	3	11

Notes:

[a] Information is incomplete since Teacher Questionnaires were not received for all participating classes and in some cases, the item was omitted. (This occurred for eleven classes in the 4th- to 6th-grade group and for three in the 7th- and 8th-grade group.)

[b] Totals for grades 7 and 8 include those for any combined group that included students in these grades (e.g., a combined 6th-, 7th-, and 8th-grade class).

TABLE 4

Questionnaire Items Categorized by
Type of Information and Source

Source:	School	Teacher	Student
Information Type			
Respondent/school/class/characteristics	x, 9	x, 1, 3, 4, 5, 6 7, 8, 9, 25, 27	x, 2, 3, 14
Prior familiarity	1, 2	30,31	1
This experience:			
a) factual	8	2, 10, 12, 13, 14, 18, 26	4, 5, 6, 7, 8, 9
b) reaction	4, 5, 6	15, 16, 20, 21, 22, 23	10, 11, 12, 13
Value perception	3, 10, 11	11, 24, 28, 29	15
Recommendations	7, x	17, 19, x	16, 17, x

Note: x indicates an unnumbered item.

ETS requires review of all data collection instruments and procedures to assure protection of the rights of study participants. These instruments were approved for use by the ETS Committee on Prior Review. In addition, at various sites the magazine and questionnaires were reviewed for appropriateness prior to participation. Site reviewers included the area board of education, district superintendents, bilingual education offices, and school staff such as principals, teachers, and bilingual coordinators.

IV. Arrangements for Data Collection

With the sample selected and the instruments developed, arrangements were made to collect data from all sites by mail survey and from a subsample through on-site observation and interview.

The author, senior research psychologist for the project, called the appropriate contact person at each site to explain the purpose and parameters of the study and request participation. The response and appropriate next steps typically followed one of three patterns:

- o Participation was promised and the sign-up form (Ranger Rick School Sample Description) was sent with a letter confirming the conversation.
- o Participation was promised contingent upon faculty review and approval. A supply of background materials was sent along with a sign-up form and a letter confirming the arrangement.
- o The required process of formal review and approval was described, appropriate information was processed and approval was granted. This procedure was required by Chicago, Miami-Dade County in Florida, and New York City. (Unfortunately, in the latter case permission was received so late that that site was used primarily for pilot testing of the study's materials and methods.)

For each participating site a supply of materials was shipped to the designated contact person, in the quantity specified, with directions for return of the completed questionnaires. (Copy of the confirming letter, the Class Transmittal form, and other correspondence used in arranging data collection can be found in Appendix C.) When these were not received by the date agreed to, or a reasonable period thereafter, phone calls were made to request return. In some cases there had been a delay in the scheduled use of Ranger Rick, or there had been an oversight and the materials were mailed promptly. In other cases, return was promised but not carried out. In addition, in a few instances when the material was received school staff judged it inappropriate for all or some classes although the pre-mailing of samples had passed a review that led to their agreement to participate.

Through her communication with site personnel, the author was able to identify a pool of sites that seemed especially fruitful for personal interview and observation. It was gratifying to have every site contacted agree to such a visit and be most cooperative in making classes, faculty, and staff available. Visits to 23 classrooms at four sites were planned originally; 25 classrooms in 16 schools at eight sites were visited. Also, 16 participating teachers were interviewed alone in addition to principals, bilingual coordinators, and resource teachers.

V. Site Visits

Site visits were included in this pilot study in order to obtain first-hand knowledge of how the Ranger Rick magazine was used and to explore in greater depth student and staff reactions. Also, visits would enable us to assess the physical and social context in which these responses were given. Such information would provide greater insight into the questionnaire responses obtained.

Since only a small sample of schools could be visited, particular attention was given to the representativeness of this subsample. Selection criteria included the major design factors--Hispanic origin, geographical region, population density, and grade level. The sites chosen were in California (Calexico, Chula Vista, El Centro, and Los Angeles), New York City, New Jersey (Union City and Vineland), and Texas (San Antonio).

After preparing a tentative list of schools in the sites that met these criteria, the author contacted appropriate school administrators to request their cooperation; such cooperation was readily obtained. A schedule for visits was then prepared that would be convenient for students and staff as well as manageable given the distances between schools. Table 5 provides a description of the site visit sample by locality, community type, Hispanic origin, and grade level.

TABLE 5

Description of Site Visit Sample

Site	Urban Suburban	Rural Small Town	Hispanic Origin			# of Schools Visited	Grade Levels Represented
			M.A.	P.R.	Cuban		
California:							
Calexico		X	X			2	4, 5, 6
Chula Vista	X		X			2	4, 5, 6
El Centro		X	X			1	7, 8
Los Angeles	X		X			3	4, 5, 6, 7, 8
New Jersey:							
Union City	X				X	1	4, 5, 6, 7, 8
Vineland		X		X		1	5, 6, 7, 8
New York:							
New York	X			X		2	6, 7
Texas:							
San Antonio	X		X			4	4, 5, 6, 7, 8

Note: Although the Union City visit occurred in one of the three participating schools, teachers from all three schools were present.

Site visits occurred in early December and from mid-January through the first week in February. The time just before and after Christmas vacation was avoided because of the disruptions in schedules and students that often occur during this period. Examination periods were also avoided. The California and Texas visits were coordinated to minimize travel costs.

The author participated in all site visits in order to assure the comparability of procedures and interpretation of the resulting information. In a few instances she was accompanied by a member of the Princeton office staff (New York City and Vineland, New Jersey) or the Southwest Regional Office in Austin (San Antonio).

The actual procedure during each visit differed depending on school staff desires and space or time constraints. In most cases conversations were held separately with the school principal and with individual participating teachers in their classrooms. In some cases, discussions were held with a group of teachers in the teachers' lounge. Where there was a separate bilingual coordinator, an attempt was made to interview that person also. When talking with students, the interviewer usually met with the entire class. In open classrooms, with several simultaneous activities, she sat with one group of students or with several groups successively. In some classrooms the teacher actively took part, expanding on the interviewer's questions and/or the students' responses, but in most schools the teacher turned the classroom over to the interviewer. After introductions, the interviewer usually began by describing the purpose of the study and the visit and showed a copy of the magazine if one was not readily evident. After requesting general comments, questions from the questionnaire that had not been covered were asked. In all classes students were asked for suggested changes and whether they preferred the magazine in English or Spanish. Emphasis was placed on encouraging students to participate in discussions concerning curriculum. In a few instances, it was possible to observe the classroom session when the Spanish Ranger Rick magazine was being used. In these particular classrooms, the presence of an observer seemed to have little impact on the behavior of the teacher or the students.

Following each visit a site visit report was prepared. Although shared with the client, to insure confidentiality they are not included in this report. A summary of the information obtained during these visits, however, is presented later in the chapter describing study findings.

VI. Data Processing and Analysis

Both quantitative and qualitative methods were used to analyze the data collected. As might be expected in a pilot study of this nature, particular emphasis was placed on qualitative methods to capitalize on the open-ended nature of many of the questionnaire items and the considerable informal information collected during site visits and phone conversations.

Data collection instruments were logged in and assigned appropriate identification numbers as they were received.[2] The number of protocols for each site was checked against the number expected from the sign-up sheets and follow-up inquiries were made after a brief interval to resolve any discrepancies noted. Meanwhile, coding proceeded as each class package arrived. Since students could respond in the language in which they felt most comfortable, the protocols in Spanish were given to persons experienced in reading Spanish to translate. (These translators were first briefed on the nature of the study and both the English and Spanish versions of the magazine and the questionnaire.) Tallies were then obtained by class for all objective questions. For the open-ended questions, coding categories were prepared both a priori and on the basis of a random sample of responses. An attempt was made to use categories that were sufficiently specific to avoid losing information since responses could be grouped at a later time. (A copy of the code lists for the Student Questionnaire are given in Appendix D.) A list of free response comments (translated if necessary) was appended to these summary class data. Data from the School Questionnaires and Teacher Questionnaires were summarized in a more informal descriptive manner by the author.

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[2] To help insure confidentiality of the data obtained, no respondent's name was requested on the individual questionnaires.

Site summary statistics for responses to the Student Questionnaires (both raw frequencies and percentages) were then prepared by grade within schools and by grade category (i.e., 4 through 6 and 7 and 8) as well as by overall totals across schools. When there were fewer than 25 students included in the 4 through 6 or 7 and 8 subtotal, no percentages were obtained in order to avoid highly questionable contrasts. Initially after these site summary statistics were obtained, the totals and subtotals were recorded by site within an Hispanic origin and population density cross classification (e.g., Mexican-American urban, Puerto Rican rural) to facilitate the noting of any similarities and differences by these major sampling parameters. As the variation in responses within sites became increasingly evident, we decided to abandon the process of summing by this cross classification since it was unlikely to produce meaningful results.

Several coding and recording formats were tried and evaluated before operational procedures were established. One primary coder was used following training and practice on several samples. Coding was monitored daily, and frequent spot-checks for accuracy were performed. In addition, as site statistics became available, these were checked for consistency and completeness and the coding of various items spot-checked. As a final check to insure coding consistency since coding specifications had undergone several revisions and because it was discovered that translations often were not verbatim, the author independently rescored and coded all the protocols and resolved discrepancies before analyzing the resulting findings.

RESULTS

In this chapter are described the quantitative and qualitative findings from the responses from students and staff to the various questionnaires and interviews. To facilitate interpretation, the data are presented in the same order in which they were analyzed--that is, by site and then by major sampling parameters. The sites are presented alphabetically by state. Findings are presented for the total sample within a site except when the variability across schools and/or grade levels warrants special attention. At such times the nature of the variability is noted. Specific individual and/or class responses are included when they may be useful to clarify or elaborate a finding. For each site, data are presented first for the participating students and then for teachers and other school staff. In those instances where sites had been visited, pertinent information from the site visit reports also is included. A description of the composite findings for the total sample by the cross-classification of Hispanic origin and population density was originally planned to follow next, but analysis of the site data indicated that this would not be fruitful given the considerable variability evidenced. A brief summary describing the major findings and issues being addressed follows each of the site descriptions and, for those states represented by more than one site, similarities and differences across the region are noted. For an overall summary of findings and ensuing recommendations, the reader is referred to the next chapter.

Although there is a rich amount of detailed data available from this study that can be explored further, the major issues to be addressed in reporting the study findings are the acceptability, usefulness, and perceived need of a Spanish edition of Ranger Rick for students and school administrative and teaching staff and the extent and nature of recommended changes for increasing its utility. An important question to be discussed is the extent to which these findings differ by participating school's location (geographical region and population density) and students' characteristics (Hispanic origin, age level, and Spanish competency). The reader is cautioned to remember, however, that this is a pilot study and any findings or conclusions are at best suggestive and should be followed up further before more definitive conclusions can be made.

California

Azusa. The sample in this small southern California community near Los Angeles comprised only 27 students from two combined 7th- and 8th-grade ESL classes, one from each of two intermediate schools in the Azusa Unified School District. Of these 27, 14 were identified as males and 11 as females. No further demographic data about the schools or students were provided for this site.

Very few students had seen the English version of Ranger Rick's Nature Magazine. The three who reported doing so, had seen it only once, all in school and one also at home; all said they had liked it. Seventy-eight percent of the students said they spoke Spanish at home, with four of the five who did not coming from one school. Although 48% stated that they could read Spanish "very well," 33% described themselves as only reading it "pretty well" and 11% "a little bit." Nevertheless, most students (85%) reportedly found the Spanish in the magazine easy, with only three responding it was "neither difficult nor easy." Reflected in the overall figure of 52% who stated that their teacher did not read to them was the fact that in one class the teacher did and in the other he/she did not. Only one student, however, said the teacher translated any of the Spanish words.

All but four students (85%) said they did further magazine-related activities in school. In both classes those who did said they used all the magazine and answered questions. Somewhat fewer (67%) reported doing further activities outside school. Again most said they used all the magazine and answered questions, but a few mentioned building the Boxosaurus. Approximately a third of the students (four from each class) said they discussed the magazine with their families and/or friends, but only three of them specified further ("hedgehogs", "dinosaurs", and "how grapes lose their weight").

When asked what they had learned, in one class five students said they had learned about animals, and two said that they had learned to study; in the other class, although many vague references to animals were given, two-thirds of the students listed specific facts that they had learned and several mentioned acquiring greater concern for caring for animals and learning about scientific methods. The learning of new words and poems also was reported.

Among the various features mentioned as liked most, dinosaurs, "Who Knows?" and "Happy Bee" were the articles mentioned most often (by seven, four, and three students, respectively); four students said they liked everything. Only four students specified what they liked least (hedgehogs and "April Foolers"). In both classes most students responded they liked everything (74% overall). Consistent with these findings, most of the students said they liked each of the four magazine features to be rated; 93% reported liking the pictures, 89% the stories, 81% the games, and 74% the vocabulary and variety. Vocabulary, however, received three neutral and two "dislike" ratings, and variety received three "dislike" responses. In comparing this edition of Ranger Rick with their other school materials, the Spanish and pictures were mentioned most (by 52% and 33%, respectively), with several students also noting it was interesting, enjoyable, and taught them new things.

Consistent with these findings, all but one student wanted to continue using the magazine, with 59% preferring it in Spanish, 26% in both Spanish and English, and only two students (7%) preferring it in English only. This pattern was consistent across schools. Seventy-four percent preferred to use it in school, but the one class accounted for eight of the ten students who wanted to use it in the home (37% overall). Although one or two students recommended that the magazine be used in kindergarten, 2nd, or 4th grade, most chose 7th grade (52%), followed by 6th and 8th grade (37% each). As for suggested changes, only two students indicated some change was desired, but they did not specify its nature. In the additional comments written after completing the questionnaire, nine of the eleven students in one class said they liked the magazine very much, with four expressing their thanks. Only one student in the other class commented further, but its content seems worth quoting, "It's a magazine that every child should read. It is complete, easy and uses many photos to illustrate materials on animals. Other magazines are lacking in this respect, leaving us with the need and desire to understand the articles covered."

Since the same bilingual teacher served both schools, many responses to the two Teacher Questionnaires received were identical. The differences noted reflected primarily the differences in the Spanish and English skills of the students in the two ESL classes. Although in both groups all the students were described as speaking Spanish "very well," in the one class 80% of them were also rated as reading and writing it "very well," whereas in the other class only 40% reportedly could read and write Spanish "very well," with 20% described as being increasingly less proficient in each of the other categories. Similarly, in the former class 40% of the students were described as speaking, reading, and writing English "pretty well," 40% "somewhat," and 20% "hardly at all"; in the latter class only 20% of the students were rated as speaking, reading, and writing English "pretty well," with 80% of the students described as only able to perform these skills "somewhat" (60%) or "hardly at all" (20%).

In both classes the teacher spent 61 to 75 minutes of the Language Arts period using all but the poems and "Dear Ranger Rick" (plus "Nature Club News" in one class), and neither read nor translated any of the material. She also had used the Activity Guide to adapt ideas to the class and found it helpful. This teacher enjoyed the magazine and liked most the fact that the magazine was in Spanish and provided good information. Nothing was mentioned as least liked. In evaluating the various magazine features she rated them all as "appropriate."

Students in both classes reportedly were enthusiastic about the magazine. In the more skilled class, they were described as interested in everything ("They got into them before I was ready for them to") and also as having read it later in their free time. Although students in the less skilled class also were reported to have been actively engaged during the class presentation the teacher described them as being most interested in the pictures; many also took the magazine home for their siblings to read. A similar contrast was noted in the teacher's response to what the students might have learned. In the former class, she perceived they had learned as evidenced by their class discussions and their fascination in what photographs could do to create "new" animals, whereas in the other class she felt that despite their enjoyment they had not learned much due to their very limited basic skills.

No similar Spanish materials were reportedly available in either school. Although uncertain whether an English edition of Ranger Rick was available, the teacher had not read it before. She perceived the present Spanish version as "very different" from the students' usual school materials because of its subject matter and noted that science presently was not available for the ESL students due to scheduling conflicts. As the quotes that follow indicate, this teacher strongly favored continued use of the Spanish version for 7th- and 8th-grade students in Language Arts as was done during the pilot phase. In responding to the issue's educational value, she said, "At this age they need to polish the knowledge of their native language. The magazine is well written, and besides being a source of new information they have the chance to see their language correctly written. They need the opportunity to read grade level material in Spanish, also both oral and written as we did." When asked about its potential use in ESL classes, she replied, "Administration is realizing these students are shut out of some subjects (science) because of team scheduling and are willing to let me include this in my time with them."

Thus, for the Mexican American students in this small California town, not only was this Spanish issue of Ranger Rick's Nature Magazine highly enjoyable, appropriate, and instructive, but the need appeared especially critical given the fact that they were being cut off from motivation for and knowledge about science areas, thereby severely handicapping them for its future use and enjoyment.

Calexico. The Special Projects Office for the Calexico Public Schools reviewed and approved the study and, following discussions with school administrative staff, four elementary schools from this California Imperial Valley town adjacent to the Mexican city of Mexicali agreed to participate. All of these schools served students in kindergarten through 6th grade and two of them also had pre-kindergarten classes. School enrollment during this period ranged from 470 to 617 (470, 547, 610, and 617). In three schools at least 99% of the students were Hispanic and on the average performed at one or more grade levels below their expected grade level on standardized reading tests.

The fourth school had slightly fewer Hispanic students (85%) and the average reading achievement level was slightly higher (at one-half to one grade level below expected grade levels). Sixty-five percent to 92% of the families of students in these four schools were in unskilled, nonfarm or farm jobs or unemployed (the unemployment figures for three of the schools ranged from 20% to 25%, but was only 2% in the fourth school where 80% of the heads of households were farm laborers). With the exception of the school with 92% of the students from the lowest socioeconomic level, the schools served a diverse population with 20% to 25% of the students' parents in clerical/sales or professional/managerial jobs.

In two schools, a 4th-, 5th-, and a 6th-grade class participated. In the other two schools, four classes participated--a combined 3rd- and 4th-grade and a 4th-grade class in both schools plus a 5th- and a 6th-grade class in one and a combined 4th- and 5th-grade and a combined 5th- and 6th-grade class in the other. Class sizes ranged from 17 to 30, with 359 students overall who responded to the Student Questionnaire. There was an approximately equal percentage of males and females among those who identified their sex (45% vs. 46%, respectively). In three of the schools, however, boys or girls predominated in some classes.

Only 10% of the students said they had seen the English edition of Ranger Rick. Although the 35 students represented all four schools, almost half (16) came from one school and one 4th-grade class in particular. For those who elaborated further, most had seen it at home two to four times and liked it. Ninety-three percent of the sample said they spoke Spanish in their homes and the majority said they could read it "pretty well" (41%) or "very well" (25%). Twenty-two of the 23 students who stated they could not read Spanish at all were either in a combined 3rd- and 4th-grade or a 4th-grade class. Similarly, 53% of the sample reportedly viewed the Spanish in the magazine as "easy" and 28 of the 44 (12% of the total sample) who replied it was "difficult" were 3rd or 4th graders. Half of the sample said their teacher did not read any of the magazine to them. This differed, however, by class within school and, with the exception of the 6th grade, occurred at all grade levels. More students (65%) said their teacher translated at least some of the Spanish. With the exception of one 4th-grade class in which the students reported the teacher translated all the words and a combined 3rd- and 4th-grade class in another school that said most of the words were translated, most students (46%) reported only a few words were involved.

Seventy-one percent of the students said they did further magazine-related activities in school. Students in three of the four 6th-grade classes said they did not, accounting for 74 of the 101 (28% of the total sample) who responded "no." In describing what part(s) of the magazine was used the dinosaur article was mentioned most (31% of the total sample), with "Nature Club News" and the puzzles a distant second and third in frequency (8% and 6%, respectively). Responses varied widely, however, within and across schools. "Nature Club News" and the puzzles were mentioned only by one of the combined 3rd- and 4th-grade classes. In that same school all students in the 4th-grade class stated they used "all" or "some of the parts," whereas all students in the combined 4th- and 5th-grade class listed the "Build a Boxosaurus" article and all those in the combined 5th- and 6th-grade class mentioned the dinosaur article. One class in each of the other schools also listed the dinosaur article as a sole response, but in other classes all or almost all students referred to "animal stories," or "science." As can be seen from the above descriptions, classes tended to give a single response. The only exceptions were the previously mentioned combined 3rd- and 4th-grade class in which all students listed "Nature Club News" and "Ollie Otter's Fun Pages," a 5th-grade class in which almost all the students mentioned both dinosaur articles and the "Ranger Rick and His Friends" story, and another combined 3rd- and 4th-grade class in which many of the students referred to Social Studies as well as Science.

Similarly, ranking activities by the overall percentages would be misleading since classes within and across schools gave varied dominant responses. For example, working on the puzzles and doing further research were mentioned most overall (15% and 13%, respectively, of the total sample). Students in only two classes, however, listed activities for either category. Also, for one class, research consisted of doing the "mud and water" experiment; for another, it meant using the encyclopedia to study more about the animals. In addition, it should be noted that even if students listed the same article, they may have reported very different activities. For example, although the dinosaur article was the predominant response in several classes, the predominant activity indicated varied greatly--reading, writing a composition, drawing, and doing the pencil puzzles. Although building the dinosaur model was the only listed activity for one class, it was mentioned by only four other students in the sample. Single class responses also were included in the "other" category. All students in one class reported having group presentations and class discussions, whereas students in another class gave the ambiguous response "Social Studies." Thus, in very few classes was more than one activity mentioned. The exceptions were the combined 3rd- and 4th-grade class that was involved in numerous activities (puzzles, the mud and water experiment, and making pinwheels and kites) and half of a 5th-grade class that described doing further reading in addition to writing compositions. Also, none of the 16 students in one 4th-grade class who said they did follow-up activities specified what they were.

Many fewer students (40%) reported doing further magazine-related activities outside school. This varied both within and across schools. In one school almost all the students in each of the classes said "yes," whereas the reverse was true in another school. In the two remaining schools, students in only one or two of the four classes said they did. In specifying what part of the magazine was used, 15% of those who reported follow-up activities indicated the "Ranger Rick and His Friends" story. The dinosaur story and "Build a Boxosaurus" article were the next most frequent responses (12% and 10%, respectively, of those who said "yes"). The majority of responses, however, were in the "other" category. Among these responses were "all" or "the articles" given by 28% of this group. No other response was given by more than five students. In describing what they did, reading and writing reports or compositions were the two activities mentioned most (by 36% and 28%, respectively, of those who said "yes"). This was due, however, to its being the predominant response in two classes each, whereas "building a dinosaur" and "going to the zoo" were each given by all the students in a single class. A few students mentioned going to the library and studying more about various animals, and one student reported that he "searched the sky and observed the birds." In further examination of the class data, it became apparent that one 5th-grade class gave the same response for follow-up activities inside and outside school (reading and writing a resume of what was read) which suggests that they (and probably other students) had difficulty making the distinction.

Only 35% of the students reported discussing the magazine with their family and/or friends. Although at least one student in every class said that he/she did, in only three classes was it the predominant response and approximately half of them (60 of 124) were by 3rd and 4th graders. "The hedgehogs," "Ranger Rick and His Friends," and "Search for Supersaurus" stories were the three articles mentioned most (by 17, 13, and 11 of the students, respectively), but "animals" was the most frequent response--given by 21 students, 15 of whom were in the same class. Various other articles were mentioned by one to four students. Five students said they discussed all of the magazine. Included among the responses in the "other" category were discussing the making of a pinwheel in class and asking the student's parents if he/she could have a dinosaur.

When asked what they had learned, most of this group of 3rd to 6th graders mentioned specific story facts (29%), science subjects (20%), or article titles or topics (19%). Learning about nature and various animals or about scientific methods were next most frequently mentioned (by 15% and 13%, respectively). Learning how to make things such as dinosaur models and pinwheels, how to care for and protect animals and use nature's resources, and learning poems were other less frequent responses. As in other sites, vague responses such as "I learned about dinosaurs" or unique responses were among the most common (given by 28% of the sample). Included among the specific responses that did not fit into the other coding categories were the following: "I learned to read"; "I learned many things I didn't know about"; "I didn't know that much Spanish, but I learned things about dinosaurs"; and "New things, new words, and enjoyed the book tremendously."

Classes varied in both the number of different responses given and the ranking of various response categories. Few age trends were observed in the response categories used. The 5th- and 6th-grade students described more specific story facts, and the 3rd- and 4th-grade students listed more story titles and topics. Surprisingly, most references to learning about scientific methods (41 of 47) were made by 3rd or 4th graders, but closer examination of the responses themselves revealed that many were simple statements such as, "I learned how the bones were protected (or unearthed)." Much less surprising was the fact that conservation issues were reported primarily by the older students. As one 6th grader said, "I learned that nature is very good and we ought to care for more things and protect the woods and places where birds and animals live." Also, the older students generally gave a greater variety of responses, both intra- and interindividually.

When asked what parts of the magazine they liked best, the dinosaur article, "Ranger Rick and His Friends," the pictures, and the hedgehogs story were mentioned by the most students (18%, 16%, 16%, and 13%, respectively). Classes differed, however, in the rank ordering of these and other features as well as in the number of preferences reported. Almost all the students in one of the combined 3rd- and 4th-grade classes listed "the animals" as their favorite feature. In other classes, students named several different articles. With the exception of the "Who Knows?" article, every article and feature categorized was mentioned by at least one student. Sixteen students said they liked the variety and everything in the magazine. Also, included among some of the preferences noted in the "other" category were the Ranger Rick pledge, "it's easy to read," the title, the questions asked, "the better way it was made," and "how everything is well explained."

Many fewer dislikes were mentioned. In fact, 115 students (32%) said they liked everything, including three classes where no more than two students said they disliked anything. The dinosaur article, which had received the greatest number of preferred choices, also received the most "dislike" responses, but by many fewer students (8% vs. 18%). The "Sea Poems" and the "April Foolers" features received the next largest number of "dislike" responses overall (6% and 5%, respectively). No other article was mentioned by more than nine students, but with the exception of the "Dear Ranger Rick" section, every article or more general response category was mentioned by at least one student. Among the specific responses included in the "other" category were the lack of questions, the fact that the names were in English although the rest of the magazine was in Spanish and, as one student commented, "There aren't any dinosaurs left." In one 5th-grade class several students referred to the difficult words ("because I don't know much Spanish"). Another 5th grader said, "I didn't like the part on dinosaur bones. I was frightened for I thought we too had bones with tunnels in them." Such a response reminds us how important it is to encourage students to verbalize their thoughts and feelings about what is taught so as to help clarify misconceptions and reduce fears. Most of the other responses referred to homework assignments rather than to the magazine itself--the questions asked, the exercises, and writing summaries. In comparing the responses of the 3rd and 4th graders with those of the 5th and 6th graders, it was noted that most of the "dislike" responses for the dinosaur article were given by the older group, whereas those for the "Sea Poems" were primarily given by the younger group, particularly one 4th-grade class.

The students also were asked to rate five features of the magazine and the majority rated all as "liked." The pictures were rated as "liked" by the most students (81%), followed by the stories (75%), variety (67%), games (60%), and vocabulary (55%). The range of "dislike" responses was only 11 to 37, with the games and vocabulary receiving the most (37 and 30, respectively).

Thirty percent of the students, however, rated the vocabulary as "neither liked nor disliked"; only 6% to 14% of the students similarly rated the four other features. In examining class responses, the rankings generally were similar, but there were two classes where vocabulary received the most "like" ratings, and three classes where almost all the students rated everything as "liked." Neither result was associated with age, but two of the four schools accounted for both findings. It also should be pointed out that in the one combined 3rd- and 4th-grade class in which a majority of the students said they could not read Spanish at all, all the students said they liked the vocabulary (as well as all the other features).

When asked how this issue of Ranger Rick differed from their other school materials, students mentioned the pictures most (23%), then the amount of information provided (13%) and the stories about animals (12%). Nine percent of the students said it was more interesting and entertaining, 7% noted its smaller size, and 6% referred to the magazine's attractiveness and colors, the stories (both in general and specific ones), the better quality of the magazine, and how much they enjoyed it. Other differences noted were the inclusion of games, the use of Spanish, the discussion of science topics, the greater variety, and that it was easier to read and understand. Twenty-one percent of the students gave vague responses or ones that did not fit the present coding categories. Included among these "other" responses were references to Ranger Rick's pledge, to physical differences such as being a magazine and having a soft cover and different print, and to the absence of written exercises or tests ("I don't have to work, I can just read it"). For a few students, however, the differences were negative--the words were too difficult, there was too much reading, and, as one student noted, there was a difference in price. The following students' statements provide further insight into the students' reactions: "It's very different from other books we have because it not only has things to do but you learn more about nature"; "It's more fun, it has more photographs and games"; "It has quality and many things I didn't know"; "It has lots of neat stories. It gives good information. It gives information that other books don't have"; "There are no math problems nor do we have to learn words. That it is in paper bag form and the fact that it has a lot of animals and many drawings"; "Because of its varied themes, although just as educational"; and "It's informative, enjoyable, and short." For one student, the most salient difference was "I read it all."

In examining responses across classes, the 3rd and 4th graders accounted for the emphasis on the pictures (67 of the 84 students who gave this response), whereas the 5th and 6th graders accounted for the second most frequent difference noted--its instructive, educational value (34 of the 45 responses). The older students also responded more often that this issue of Ranger Rick was more interesting and entertaining than their usual schoolbooks (24 of 33 such responses. One 6th grader said, "It's more fun and not dull and boring like most of the things." As might be expected, they also replied more often that it was easier (9 vs. 3). On the average, the 5th and 6th graders gave a greater variety of responses, but this was primarily due to the two combined 3rd- and 4th-grade classes in which most students gave a single common response ("more pictures").

It is not surprising given the generally very favorable response to the magazine indicated in the results described so far that most students (79%) said they wanted to continue receiving it; only 42 students (12%) said they did not. These 42 students were scattered across grade levels and schools, as were the 26 (7%) who said they did not care if they received it or not. Although there was no significant difference across grade levels, half of the students who said "no" came from one school--the same school in which students reportedly had the most difficulty reading Spanish. Overall, more students (56%) expressed a preference for receiving future issues in both Spanish and English; 25% said they preferred it in English only, 16% in Spanish only, and 3% said they "did not know." Although these results were generally consistent across classes, there was some variation within and across schools. In two 4th-grade classes, more students preferred to receive future issues in English only and in one 6th-grade class, more students preferred to receive it in Spanish only. Also, the three classes in which students preferred a Spanish to an English edition were from the same school and accounted for approximately half the "Spanish only" responses (25 of 56). Since 80% of the parents of students in this school were farm laborers, more Hispanic students in this school are likely to have parents with limited schooling and English competence and/or be recent arrivals to this country.

As for the preferred location for reading future issues of Ranger Rick, more students chose school rather than home (52% vs. 43%), with 9% indicating their desire to read it also in other places such as the park, library, beach, and on trips. Examination of the separate class data revealed three classes (4th, 5th, and 6th grade) in which more students preferred to use it at home and three classes (two 4th grades and one combined 3rd and 4th grade) in which the choice was evenly split. Some students provided rationales for their choice: "In school I can study more"; "In school because at home I can do nothing"; "At home because I have more time"; "At home because the teacher makes me do a resume"; "At home because I go to play and don't read"; "At school because I can learn more"; "At home because I like to read in the night and in the day also"; "At school because I read better"; "At school because at home can't teach or explain"; and "At home because I can read on vacation." And several students said, "At home, school, and in all places because it's good."

Slightly more than a quarter of the students (28%) recommended that changes be made in future issues. The most frequent change mentioned (by 26 students or 7% of the total sample) referred to the games; some wanted more, some wanted them easier, and some wanted a greater variety. The next most frequently mentioned change was made by only 15 students (4% of the sample) and referred to the pictures; most requested that there be more of them, but a few wanted to delete certain pictures that were frightening or ugly. Ten students (3%) wanted specific articles deleted, eight (2%) wanted the Spanish changed to English, and seven (2%) wanted more stories. Other suggestions were to make the magazine bigger, "add more beautiful pages, more of what you have," add jokes and riddles, include other animals, delete the yowza picture, and make the magazine easier. Included among responses in the "other" category were the following: "Change the animals' names"; "Have only dinosaurs"; and "Change the Spanish to French." With the exception of games, no age or school trends were noted; 17 of the 26 students who suggested additional or revised games came from the three classes in one school and across schools 18 of them were 3rd or 4th graders.

Despite these suggested changes, in addition to wanting to continue receiving the magazine themselves, at least 45 students recommended that future issues be used at every grade level from kindergarten through 8th grade. As expected, more students recommended those grade levels represented in the sample. The 5th grade received the most choices (61%), followed by the 4th grade (60%), and then by the 3rd and 6th grades (49% each). With the exception of the three 6th-grade classes, in which more students recommended the magazine be used at a lower grade level and one 4th-grade class that recommended it be used at a higher grade level, students in the remaining classes selected their own grade level most often.

The students' comments at the end of the questionnaire summarize best their reactions to this edition of Ranger Rick. One 4th grader said, "I like the magazine because it has a variety of things and can learn much more. I hope I can continue reading it." Other 4th graders commented, "It's pretty. Everyone should read it"; "I like it because it was fun reading it in class and with my friends in class"; "Please include more instructions with games"; and "I think Ranger Rick is a book to read better Spanish." Several students in one 4th-grade class said they wished they would add more stories of Mexican children. Another class phrased their comments in the form of letters to Ranger Rick. A 5th-grade student stated, "We use it with eyes and ears and I like to read so much and I can read it to my mother and father, sisters and brothers." Other 5th graders said: "I like it because it talks about nature. It teaches you things that would be useful to you as you grow older. I also like it because you learn new words in Spanish that you did not know before"; and "The vocabulary was difficult. Nevertheless I learned much from it and liked to read it." Among the various comments from 6th-grade students were the following: "Liked it very much. Almost read the entire magazine every day because it was very interesting and very entertaining. Liked photos and stories. I liked all except 'Happy Bee' cause I didn't understand it. But the rest I liked"; "It was fun"; "I think it's a very good magazine. Shouldn't change anything"; "It has unknown words to us which we should use more"; "I like the magazine very much for its easy reading and interests me a lot and should be enlarged"; "I thought it was a very good magazine because I learned lots of things I don't know"; and "I like Ranger Rick because it has stories previously unknown to me such as solar energy, hedgehogs, and dinosaurs. Would like to continue reading to continue to learn more."

School Questionnaires were received from all four schools. The respondents comprised two school principals, a bilingual resource teacher, and one of the participating class teachers. Only one of the schools had an English edition of Ranger Rick available, and the respondent for this school was the only one who had seen it before (more than five times at school and had liked it a little).

All four respondents said they liked the magazine. When asked to rate the various magazine features, the one principal said he/she liked them all, whereas the other said he/she disliked the vocabulary, neither liked nor disliked the games, liked the variety of topics and interest level of the stories, and liked the pictures very much. The bilingual resource teacher reported that he/she liked the vocabulary and liked very much the other features, and the classroom teacher also said that he/she liked very much the variety and pictures and liked the vocabulary and interest level of the stories. In responding to what they liked most, two respondents mentioned the variety of stories and "great" colorful photographs; another listed the photography and activities; and the fourth listed the variety of topics presented as well suited for 10- to 12-year-olds. Two staff members responded to what was liked least--the vocabulary level and the fact that some activities such as in "Ollie Otter's Fun Pages" were too difficult for that teacher's students. These same two respondents recommended changes for future issues--different editions for primary and intermediate level students and "more children experience type of stories right along with what you now have."

Three staff members also had discussed the magazine with some of the students. One reported that the students liked the magazine very much, another that they liked it, and the third one said that they neither liked nor disliked it. Given the generally favorable reaction of these staff and the students in their schools, they recommended that a Spanish edition of Ranger Rick be continued. One staff member was uncertain what grade levels to recommend, but in commenting on its educational level stated, "First of all it would give the bilingual classes a booster because it would give those classes an opportunity to read in Spanish. Secondly, it would give our recent immigrants from Mexico a chance to begin and relate to our educational system because of the fact there are few materials in Spanish." Two staff members recommended that it be used in grades 4 through 6 in Language Arts, Science, and Spanish, and the third recommended its further use in kindergarten through 3rd grade. These school staff also commented on its educational value: "This issue was well received by all the students who looked at it. We would like to get more issues at a later date if you are going to continue producing it." "A student population such as this school's (75% of the students' families had been described as farm laborers or unemployed) has a great need for such materials." They also perceived its value for both bilingual and ESL programs. "I feel this would help our (bilingual) Science program, as we are lacking in Spanish Science materials." "It would fit in very good in both the bilingual and ESL programs." "We have an extensive (bilingual) program and would benefit from a variety of materials. ESL (also) is a very important component in our curriculum." "It would really help in the ESL program because it would make it more interesting because of the beautiful photography."

Teacher Questionnaires were completed for 10 of the 14 participating classes. The findings will be discussed first for the two schools with three classes each and then for the two with four participating classes.

As noted earlier, two schools had a 4th-, 5th-, and a 6th-grade class participating in the study. Although no Teacher Questionnaires were completed for the one school, the class transmittal forms indicated all three classes used the magazine during a bilingual Science period. In one class it was part of a science unit on "animals and their environment"; in another class students were assigned a certain amount of pages to read at home and the following morning they discussed them in class. One of the participating teachers had responded to the School Questionnaire and the responses indicated that both he/she and the students found the magazine instructive and enjoyable. In the other school, at least 86% of the students in all three classes were Hispanic, spoke Spanish in their homes, and were enrolled in a bilingual program. The 4th-grade students were described as speaking Spanish "very well" and as reading and writing it "pretty well." They were rated as speaking and reading English "pretty well" and writing it only "somewhat." Eighty percent of the 5th graders also were described as speaking Spanish "very well," although 20% could do so only "somewhat," and 10% "hardly at all." They were much less proficient reading and writing Spanish, however, with only 34% rated as performing "very well" and 26% as "pretty well"; again 20% and 10% were rated as only "somewhat" or "hardly at all" able to do so. Although 50% were described as speaking, reading, and writing English "very well" (20%) or "pretty well" (30%), 40% were rated as able to do so only "somewhat," and 10% "hardly at all." Almost all the 6th-grade students (95%) were rated as speaking Spanish "very well" and most as reading and writing it "pretty well" (85% and 75% to 80%, respectively). Also, most were described as speaking and reading English "pretty well" or "very well" (88% and 10%, and 65% and 15%, respectively) and as able to write it "somewhat" or "pretty well" (55% and 40%, respectively); none were rated as "hardly able at all" to do any of these skills.

All of the classes used the magazine during Science and Spanish reading periods; two for 46 to 60 minutes and one for at least 90 minutes. In the 4th-grade class, eight articles were selected because of the pictures and content. The teacher read three of the eight articles (the two dinosaur stories and the hedgehogs article) and reportedly translated about half the words. The 5th-grade teacher selected four articles that he/she thought the students might enjoy more since they were familiar with some of the terms. Individual students read aloud one of them ("Search for Supersaurus") and the students read the remaining three articles on their own with the teacher translating a few words. The 6th-grade teacher chose four articles based on the "nature of history involved, involvement of nature poetry, and cartoonistic approach in science towards solar energy." Three of the four articles were read by the teacher, but none of the Spanish was translated. None of the teachers used the Activity Guide.

All of the teachers said they enjoyed the magazine. When asked what they liked most, they listed the content ("Science presented in a much more simplistic way than our (4th grade) Science book"), the pictures and topics, and the variety. Although only one teacher responded to anything liked least ("The vocabulary seemed a little too high."), when rating the various magazine features the other two teachers rated the vocabulary as "somewhat inappropriate." The 6th-grade teacher made no ratings, but the other two teachers both rated the pictures as "very appropriate" and the games as "appropriate" (the 4th-grade teacher added, however, that they needed teacher guidance); the story topics were rated as "very appropriate" by the 4th-grade teacher and as "appropriate" by the 5th-grade teacher. All three teachers suggested changes for future issues--"Maybe some reading exercises inserted"; "A list of new words introduced in the beginning of the article or a glossary at back of magazine. What would be nice would be addresses where students could get further information"; "Some of the language brought down to students' comprehensible level."

All three teachers also said that their students had enjoyed the magazine and were actively engaged during its use. The 4th-grade students reportedly liked most the pictures, particularly those of the animals and the "funny" pictures in the "April Foolers" section. The 5th-grade students also had especially liked the pictures and were actively involved in discussing what they had learned; the 6th-grade students were described as liking most the variety of topics involved. In commenting on what their students had liked least, the 4th-grade teacher said that the stories may have been too long for a 4th grader, and the 5th-grade teacher reported that the students complained about having to look up words in the dictionary and not having any dictionary at home to use. In general, though, these teachers perceived their students as not only enjoying but learning from the experience, as evidenced by their class discussions, compositions, and the "visual view of dinosaur excavations and close-up view of detailed animals." In one class both the teacher and the students reportedly took the magazine home to read further.

Since one teacher did not complete the questionnaire, the following findings are based on the responses of only two of the teachers. Both teachers rated this Spanish issue of Ranger Rick as "somewhat different" from their students' usual school materials because it was "more detailed in area of archaeology and a good supplement to our Science unit" and "in magazine form and more casual outlook." One teacher reported that the school used to have "El Informador," but it was too easy for 4th grade and above, and both teachers said there were no similar Spanish materials presently available in the school. Although the one teacher also stated the English edition of Ranger Rick was not available and he/she had not read it, the other teacher said it was available in the school's library and that he/she had read it in school two to four times and had liked it a lot.

Given their generally favorable reaction to the magazine and the lack of similar Spanish materials, they enthusiastically recommended its continued use. The one teacher recommended it for 5th-grade Language Arts and Science; the other recommended it not only for these subject areas, but also for Spanish and for 4th through 8th grade. The latter teacher also suggested the magazine would be useful for teaching 5th- through 8th-grade students to follow instructions, but added that the necessary funds might not be available for purchasing the magazine. In commenting on the magazine's educational value, they said: "Good for Spanish Language Arts. Excellent supplement to our science unit on dinosaurs. Pictures were A+ quality!"; "I think it's valuable due to its information on animals. Unfortunately, we have too few magazines in Spanish that do any justice to this area." The third teacher commented earlier, "The Spanish edition of Ranger Rick is excellent as an enrichment source towards science and social studies as well as a good periodical for reading (practice/exercise) development." The two teachers who responded to the question concerning the magazine's potential usefulness for various instructional programs viewed it as valuable for bilingual programs--"teaching of Spanish through content material," "Excellent!". One teacher also noted it would be useful for ESL classes by providing "description of pictures, possibility of whole group activity using preview/review." This same teacher also pointed out that the magazine could be used to cut out pictures for bulletin board display.

After completing the questionnaire, the 4th-grade teacher commented that the Student Questionnaire was too difficult for 4th graders to do alone. Consequently, they had done it as a group which might have led to many similar responses. Although not reported by other teachers, this may account for many of the similar responses in other classes in this and other sites.

As reported earlier, the other two Calexico schools both had a combined 3rd- and 4th-grade and a 4th-grade class participating, with one school also including a combined 4th- and 5th-grade and a combined 5th- and 6th-grade class, and the other a 5th- and a 6th-grade class. No questionnaire was completed for the 6th-grade class, however. Although in one school 86% of the students were Hispanic in all four classes, in three of the classes at least 86% also spoke Spanish in their homes and were enrolled in a bilingual program; in the combined 5th and 6th grade only 71% to 85% of the students spoke Spanish in their homes, and only 56% to 70% of the 4th-grade class were classified as bilingual students. With the exception of the combined 5th- and 6th-grade class, most of the students were described as very proficient in speaking and reading Spanish and moderately so in English. The students in the combined 3rd- and 4th-grade class were rated as speaking Spanish "very well" and reading it "pretty well" and as speaking and reading English "pretty well"; they were described as able to write both Spanish and English only "somewhat." Most of the 5th-grade students were rated as speaking and reading Spanish "very well" (60% and 70%, respectively), and as writing it "very well" (40%) or "pretty well" (30%).

Most of these students also were described as speaking, reading, and writing English "very well" or "pretty well" (30% and 40%, 20% and 60%, and 30% each, respectively); 10% of them reportedly could neither speak nor read it, nor 20% write it, however. In contrast, students in the combined 4th- and 5th-grade class were rated as speaking, reading, and writing Spanish "somewhat" and English "pretty well." Most of the 6th-grade students were described as speaking, reading, and writing Spanish "very well" or "pretty well" (100%, 80% and 20%, and 50% and 10%, respectively). Although less proficient in English, the majority were rated as speaking and reading English "very well" or "pretty well" (20% and 40% each) and 50% were rated as writing it "pretty well"; a substantial number, however, could do so only "somewhat" or "hardly at all" (30% and 10%, respectively, for speaking and reading skills, and 30% and 20%, respectively, for writing performance). As the following paragraphs reveal, despite these differences in students' Spanish and English competencies and in the extent and nature of the magazine's use, the teachers were enthusiastic in their response to the magazine and their students generally found it enjoyable and instructive.

Three of the classes used the magazine during Language Arts and Science periods and one used it during Science only. The class transmittal form described them as bilingual classes and reported that three of them used the magazine during Social Studies. It appears, however, that Science units are often included in the Social Studies curriculum. More than 90 minutes were spent on 10 of the articles in the combined 3rd- and 4th-grade class. The teacher reported that some of the outstanding Spanish readers read seven of these articles to the class and he/she translated only a few of the words. In the 4th-grade class more than 90 minutes were also spent on 10 articles, but the teacher read eight of them and also translated a few words. The combined 5th- and 6th-grade class spent 61 to 75 minutes on the first eight articles. None, however, were read to the students, although the teacher translated a few words. Students in the combined 5th- and 6th-grade class read nine of the articles they wanted to read first during the 30 to 45 minutes devoted to the magazine's use. In this class the teacher reportedly translated none of the words. Two of the teachers used the Activity Guide ("the pinwheel idea" and "everything up to page 28") and both reportedly found it helpful.

All of the teachers said they liked the magazine. Three of them said they liked the pictures best ("beautiful," "great"), with two also mentioning the interesting articles and good quality; one said he/she liked the variety best. Only two teachers responded to what was liked least and both referred to the vocabulary ("Kids couldn't relate to some of the words"; "Vocabulary a little intensive or high for limited Spanish speakers"). These same teachers also suggested that the vocabulary be modified in future issues ("Improve the wording of some articles"; "Have different reading levels--easier ones"). Another teacher recommended the future inclusion of other science topics such as agriculture and mechanics. All four teachers were generally very favorable in their ratings of the various magazine features. All rated the pictures as "very appropriate"; the story topics were rated "very appropriate" by one teacher and as "appropriate" by the others; the games and activities were rated as "very appropriate" by two teachers, "appropriate" by one, and as "somewhat inappropriate" by the 4th-grade teacher; and the vocabulary was rated as "appropriate" by three teachers and as "somewhat inappropriate" by the teacher for the combined 4th- and 5th-grade group which was earlier described as least proficient in Spanish.

With the exception of some of the limited Spanish-speaking students in the combined 4th- and 5th-grade class, all the students were described as actively engaged when the magazine was presented. In describing what their students appeared to like most, the teacher for the combined 3rd- and 4th-grade class reported the stories and pictures that illustrated them ("interest remained high throughout each period while we read and discussed each article"); the 4th-grade teacher listed the dinosaurs and hedgehogs; the teacher for the combined 4th- and 5th-grade class said the "fantastic pictures"; and the teacher for the combined 5th- and 6th-grade class listed the art projects because "they all brought something in to make a dinosaur." The 4th-grade teacher and the teacher for the combined 4th- and 5th-grade class were the only ones that reported anything their students did not like; the former referred to some of the poems and the latter to the difficult vocabulary and reading comprehension level. Three of the teachers also reported their students' further follow-up activities--reading the magazine on their own, reading it with their parents, and checking the spelling of dinosaur names.

All the teachers, however, thought their students had learned from using this issue of Ranger Rick. They commented as follows: "They were eager to try the experiment "Magic with Mud"; "Information in magazine well presented. Students continued discussing the information in the magazine several days after we read it"; "Recalled facts about what was read"; and "They were interested in going to the library and checking out books and looking for information in the encyclopedia." When asked to rate how different the magazine was from their students' regular school materials, two teachers described it as "somewhat different" (one noting it was in a different form--magazine instead of textbook, and the other not specifying any reason), one as "very slightly different" because of the "good pictures", and one "not at all" because it was "very complete and good variety." These responses not only indicate the four teachers' different reactions to the magazine, but also the varied interpretations they gave to the term "different."

According to these teachers, the English edition of Ranger Rick was not available in the school, nor had any of them read it. They also reported the lack of similar Spanish materials in the school. Given this lack and their favorable reaction to the present Spanish edition of Ranger Rick, they all recommended that it be continued in their school. One teacher did not specify grade levels or subject areas for future use, but two teachers recommended it be used in grades 4 through 6 in Language Arts, Science, and Spanish, and the fourth teacher recommended that although it be used for 4th- through 6th-grade Science, it only be used in 5th and 6th grade for Language Arts and Spanish.

All four teachers perceived the magazine's educational value. Their own words express it best. "Most knew the meanings of the words that were in the articles, yet those words might not be in their vocabulary." "Excellent." "I personally think this magazine is very well put together, especially with great pictures to follow along. This magazine has a very good intensive vocabulary, especially for the fluent Spanish speaker." "I've been a bilingual teacher for 4 school years and your magazine is one of the best bilingual materials I have seen. It is great for teaching Science." Also, when asked to comment on its potential usefulness for bilingual, ESL, and other instructional programs, they were very positive about its use in bilingual classes. They commented as follows: "We could use this high interest material to improve reading comprehension and content areas"; "This is the appropriate program to use it in due to the fact that we also study and learn Spanish"; "Excellent"; and "Teachers will be eager to subscribe to this magazine. Is one of the best in Spanish." Only two teachers commented on its usefulness for ESL classes; one said it was "okay" and the other that its use was very limited.

The teachers' additional comments upon completing the questionnaire only reiterated their enthusiastic response to this pilot use of the magazine. "I wish to see you in the future here at (deleted) school. Thanks." "The quality of the magazine is superb. The children really enjoyed the magazine. They took it home and shared it with their parents." "Try to have Ranger Rick implemented at our school site!"

The sample in the fourth school comprised a combined 3rd- and 4th-grade, a 4th-grade, a 5th-grade, and a 6th-grade class. Since no questionnaire was received for the 6th-grade class, the findings reported below are limited to the first three classes. At least 86% of the students in these classes reportedly were Hispanic, spoke Spanish in their homes, and were enrolled in a bilingual or transitional program. (The 6th-grade class transmittal form also indicated this class was comprised of students in a bilingual or transitional program.) The substitute teacher who completed the questionnaire for the combined 3rd- and 4th-grade class did not rate the students' skills in speaking and writing Spanish, but described them as reading it "somewhat"; they were rated as speaking English "pretty well" and reading and writing it "somewhat." Most of the 4th-grade students were rated as speaking Spanish "very well" (85%), reading it "somewhat" (50%) or "pretty well" (35%), and as writing it "somewhat" (70%). In contrast, 50%, 60%, and 70%, respectively, could speak, read, and write English only "somewhat"; 20% reportedly could hardly do any of these skills. Most of the 5th-grade students were described as speaking, reading, and writing Spanish "pretty well" (99% and 80% each, respectively). As expected, they were less proficient in English, with 50% described as speaking, reading, and writing English "somewhat", 28% "pretty well," 20% "very well," and 2% "hardly at all."

The extent of time the magazine was used varied from one to several periods and in only one class did the teacher read any articles to the class. The substitute teacher for the combined 3rd- and 4th-grade class had the students spend 30 to 45 minutes during free reading time in a Social Studies (and Environmental Sciences) period. The teacher neither read nor translated any of the Spanish and did not specify what parts of the magazine were used. The 4th-grade class spent 61 to 75 minutes during Science with eight articles. Their teacher read seven of the articles and translated approximately half of the words. The 5th-grade class spent more than 90 minutes during discussion time in their Science class on three articles that "looked interesting" (the two dinosaur stories and "Ranger Rick and His Friends" story). The teacher reportedly translated a few words, but did not read any of the stories to the class. According to the Class Transmittal form, the 6th-grade class also used the magazine during class discussion time, but the amount of time spent and the articles used are unknown. None of the teachers used the Activity Guide, but two said it was not available.

The three teachers who completed questionnaires all stated they enjoyed the magazine. All said they liked the pictures best and one also mentioned the interesting stories, particularly the Dry Mesa excavation ("Search for Supersaurus"). Only one teacher noted anything liked least--the lack of follow-up--and recommended that future issues include such activities; no other changes were suggested. In rating the various magazine features, all three teachers rated the story topics as "appropriate"; two rated the pictures as "very appropriate" and one as "appropriate"; and two rated the games and activities as "appropriate" and one (the 4th-grade teacher) as too difficult and "somewhat inappropriate." Only two teachers rated the vocabulary, one (the 5th-grade teacher) rated it as "appropriate," and the teacher for the youngest group considered it "too difficult" and rated it as "somewhat inappropriate."

All three teachers perceived their students as actively engaged with the magazine as evidenced by their interest in the pictures, in reading and discussion, and in the dinosaurs. None of the teachers indicated anything the students liked least, but at least in one instance (the combined 3rd- and 4th-grade class) this was due to the fact that the students had read the magazine on their own. The substitute teacher for the youngest group also responded that he/she did not know if the students had learned anything, but the other two teachers perceived they had, although only one elaborated further ("dinosaurs"). These latter two teachers also reported that their students did further reading at home.

According to these teachers there were no similar Spanish materials in the school. Two teachers rated the Spanish issue of Ranger Rick as "somewhat different" from their students' usual school materials ("up-to-date and interesting story topics"), and the substitute teacher for the combined 3rd- and 4th-grade group described it as "very different in content from the dull Science book." In addition, the English edition of Ranger Rick was not available in the school nor had any of the teachers read it before.

Thus, when asked if they would like to continue to have a Spanish edition of Ranger Rick in their school, all three teachers said "yes." Their recommendations, however, varied. In two instances the teachers restricted their recommendations to their own classes, 4th-grade and 5th-grade Science, but the third teacher recommended it be used in grades 3 through 6 for Language Arts, Science, and Spanish. They perceived both its general educational value ("colorful and exciting"; "very good") and its particular potential for bilingual classes ("This would supplement our nearly nonexistent Spanish Science area"; "Much potential in Science program"; "Could be used to supplement our Science program"). Only one teacher, however, commented on its potential use for ESL classes: "I can't see how this would help except to strengthen L^1 (students) to go into L^2."

Site visits were made to two of the elementary schools participating in the study that were located at opposite ends of this Mexican border town. Not only is the community 90% Hispanic, but it serves a large daily flow of Mexican visitors. In the one school I met separately with the principal and with the bilingual resource teacher, after which I visited two of the participating classes, a 5th grade and a 6th grade. Both administrative and teaching staff and the students in this school were very enthusiastic about the magazine. The students expressed their pleasure with the stories and pictures; the dinosaurs were the favorite topic. The students generally reported no difficulty with the Spanish vocabulary nor with the various games and puzzles. All said they wanted to receive more issues, but although they stated they liked having the magazine in Spanish, most of the students indicated they preferred having it available in both Spanish and English. When asked what changes they would like to suggest, two students requested stories and pictures about animals in the desert.

In later discussions with the Resource teacher, she emphasized the value and need for an attractive Spanish magazine in the Science area. This teacher was especially impressed with the relevance of the article on solar energy for this part of the country and believed the general emphasis on conservation was of considerable societal value.

In the other school I met briefly with the principal and then interviewed two of the participating teachers that were available. One taught a 4th-grade and the other a 6th-grade bilingual class. Both spoke very favorably of the magazine and expressed their concern for more and better Spanish materials for their students. Since the 4th-grade class had just completed a unit on dinosaurs the issue was particularly relevant. For this class, however, the vocabulary seemed much too difficult. The teacher explained that most of the students were born in the United States and although they speak Spanish they cannot read it. She recommended, therefore, a simpler vocabulary as is done in the textbooks they use.

The sixth-grade teacher reported that the students in that class had no difficulty with the vocabulary. They, too, especially liked the stories about dinosaurs. He stated that the different articles and the pictures were very beneficial as they acted to raise the students' curiosity. When discussing the games, he noted that many of the students in the class had difficulty distinguishing the animals and therefore were unable to match them appropriately with the North or South pole. Both teachers strongly advocated continuing the publishing of a Spanish edition. They also agreed that separate Spanish and English magazines should be available; they should not be combined. They believe that by keeping them separate one built interest rather than dependency. We concluded our talk with their expanding on the need for more and better Spanish materials, particularly in the science area, and their very favorable reaction to this attempt.

The administrative and teaching staff at both schools indicated the considerable difference in Spanish emphasis between Calexico and El Centro, a town

15 miles north also participating in the study. Although Calexico is reported to be 90% Hispanic, the El Centro community is only 45% Hispanic. In the second school visited, for example, there was only one Anglo family enrolled.

Thus findings from both the questionnaire responses and site visit interviews indicated the enthusiastic response of students and staff in this California farm area bordering Mexico to this Spanish edition of Ranger Rick and the great need for Science materials for these students. For the youngest students, a somewhat simpler vocabulary seemed indicated, but for the older students and those newly arrived Mexican Nationals who had attended school, the vocabulary and content were not only appropriate but eagerly received.

Chula Vista. Two elementary schools in Chula Vista, a suburb of San Diego close to the Mexican border, participated in this pilot study; one served pre-K to 6th-grade students and the other, a bilingual magnet school, served only 4th- to 6th-grade students. Unfortunately, due to mail difficulties, questionnaires were only received from the former school, although the site visit to the latter provided very useful additional information. The school for which the following questionnaire results are described, during the time of the study had an enrollment of 446 students, 45% of whom were Hispanic. Fifty percent of their families were described as working at unskilled jobs (35% nonfarm and 5% farm labor) or as unemployed (10%). On standardized reading achievement tests, the students in this school on the average performed at grade level.

The sample responding to the Student Questionnaires comprised 28 students each from a 5th- and a 6th-grade class who were described as in a "transitional" rather than a bilingual program. Approximately a fifth of them had seen the English version of Ranger Rick. Nine of these 10 students were in the 6th-grade class and most had seen it in school; four of them had read it only once and only four reported liking it, with three neither liking it nor disliking it, and one disliking it. Unlike most of the other students participating in the study, including those at the other Chula Vista school, the majority of these students (57%) reportedly did not speak Spanish in their homes. Although slightly more than half (16) of the 5th-grade class did, only 29% (8) of the 6th-grade class did. Overall, 41% said they could not read Spanish at all, and 29% only "a little bit" (11% said they could read it "pretty well" and 20% "very well"). Again, the 6th-grade class had the most students (14) who could not read Spanish at all. An example of the difference in Spanish literacy in the two classes is the fact that only one 6th-grade student used the Spanish version of the questionnaire as contrasted with several who did in the fifth-grade class. Similarly, 50% of the sample reportedly found the Spanish used in the magazine difficult and 23% neither difficult nor easy. More students in both classes reported it to be difficult, although to a lesser degree in the 5th-grade class. Thus it is not surprising that 79% of the students (all of the 5th-grade and more than half of the 6th-grade students) reported that their teacher had read the articles to them and that all said he/she had translated at least some of the Spanish (75% said "all" and another 9% "most" of the words). All but one 5th grader and 16 of the 28 6th graders said the teacher had translated all the words. Although these within-class differences may result in part from student errors in understanding and/or responding to the questionnaire, they may also reflect individual attention to the students' different levels of Spanish literacy.

Forty-three students (77%) said they did further activities in school, including all but two students in the 5th-grade class. The follow-up activities were very different in the two groups, however. Almost all of the 5th-graders reported using the "Search for Supersaurus," hedgehogs, and fun games sections and all responded "pencil puzzles" to the question on activities. With the exception of three 6th-grade students who mentioned the dinosaur or hedgehog stories, the remainder who responded "yes" to this question referred to all the magazine. In describing their follow-up activities they reported learning to speak and read Spanish. Some students commented that they were putting signs up around the room and working in small groups to learn the words. Only four students (two from each class) reported doing any further activities outside of school, but none of them specified what they did. Also, only 25% (10 of the 14 being 5th-graders) reported discussing the magazine with their families and/or friends and they specified various different stories.

The classes differed considerably in their responses to what they had learned. In the 5th-grade class, 24 of the 28 students mentioned learning about animals, specifically, mammals living in burrows, with a few also giving vague responses that referred to learning about dinosaurs or hedgehogs; one child mentioned learning new words. In the 6th grade, many different responses were given. The most frequent category of response also was learning about nature or the development of various animals, but several students presented specific story facts, as well as noting they had learned to read some Spanish, to care more for animals and nature, to become familiar with scientific methods and, as one student said, "I learned that it is hard for people that don't know English."

For the combined sample, the games, hedgehogs, and dinosaurs were mentioned most frequently as liked most (25%, 23% and 20%, respectively). The puzzles, however, were listed only by the 5th-grade students. In contrast, many fewer students mentioned anything they liked least, with no more than three students (for the hedgehog article and for the Spanish used) mentioning any single feature. A fifth of the students said they liked everything. With the exception of the vocabulary used, the majority of students liked the various features of the magazine they were asked to rate. Pictures were liked most (82%), followed by the stories (73%), variety (70%), and games (66%); vocabulary was rated as "liked" by only 48%. Although the rankings were similar in both classes, the 5th grade was much more positive, expressing only three dislikes in contrast to the 6th graders who gave 21 "dislike" responses (8 and 5 of which were for vocabulary and games, respectively). These findings probably reflect, at least in part, the greater lack of Spanish literacy in the older group, and the frustration as expressed by one student of "not understanding the words but wanting to know what they were saying."

In comparing this edition of Ranger Rick's Nature Magazine to their other school materials, the most distinctive feature for this group of youngsters was its being in Spanish; 41% of the sample indicated that fact. The other features noted (but by no more than four students each) was its pictures, animals, stories, and games. Most of these other differences were noted by the older students. Few (8 or 14%) indicated that they desired any changes to be made in future issues, with three each wanting them changed to English and the number of animal stories increased. Also mentioned was increasing the number of stories in general and making the magazine funnier. All these suggested changes came from the 6th-grade class since the one 5th-grade student who requested a change did not specify its nature.

Despite their difficulties with understanding this Spanish edition, the majority of students (75%) stated they wanted to continue receiving the magazine. Only two students (6th graders) said they did not, but there were eight (six of them from the 6th grade) who responded they did not care either way. Fifty-two percent of the total sample (20 of the 29 being from the 5th-grade class) expressed a preference for having the magazine in both Spanish and English, with an additional 27% preferring it only in English; only two students (one from each class) expressed a preference for a Spanish edition only. Slightly more students expressed a preference for using it at school than in the home (46% vs. 39%), but several indicated they would like to use it in both places. A few students in both classes also mentioned using it in other places such as friends' homes and on trips. One 6th-grader said she/he "would like to share it at my mom's work. I think they'd be interested in it." They also recommended that the magazine be used in every grade from kindergarten through 8th grade, with the 5th grade recommended most by both classes (59% overall), closely followed by the 6th grade (50%).

Only five 5th-grade students provided additional comments, but those that did reported how much they enjoyed the magazine and wished it were published weekly. One of them said, "It has valuable information and is the first book I liked so much. I would like to read it more frequently so that I may learn more Spanish." Thirteen 6th graders commented further. Most stated how much they enjoyed the magazine and wanted to continue receiving it because it was interesting, contained good stories and pictures, and helped them learn about animals. Several noted, however, that they would prefer receiving it in English "so that I can learn more." The one student in this class who responded in Spanish, after noting his/her enjoyment of the magazine added, "It was difficult cause no one in class, except eight of us, speak Spanish." Yet one student responded, "I thought this magazine is fun to read and to look at all the colorful pictures and to play all the (illegible) and to find the words that are in Spanish that look like English. I hope I can get some issues in English, but when I learn Spanish I'll get Spanish and English Ranger Rick's magazine. I really enjoy this magazine." And as one student succinctly stated, "I thought it was real nice and neat. I wouldn't like you guys to change nothing in them."

Only one of the two teachers completed the Teacher Questionnaire. The class was described as being 41% to 55% Hispanic, but only 25% to 40% reportedly spoke Spanish in their homes. The teacher commented that few were fluent in Spanish or English. Most were rated as able to speak, read, and write Spanish "hardly at all" (58%, 84%, and 87%, respectively), with only 28% and 13% each, respectively, described as performing these skills "very well." In contrast, the majority (77%) reportedly could speak English "very well" and read and write it "pretty well" (60% and 91%, respectively).

The magazine was used during Science periods for more than 90 minutes. The teacher read six parts selected by the students and translated all the words while doing so. "Since so many students don't read Spanish we did only a little at a time." The Activity Guide was not used.

This teacher was very favorable in her reaction to the magazine. She liked most the dinosaur articles and the "Sea Poems" and least "Dear Ranger Rick." The pictures and story topics were rated as "very appropriate," the games as "appropriate," and the vocabulary as "appropriate for Spanish speakers." No changes were suggested for the magazine or the Activity Guide.

The students were described as actively engaged while the magazine was used and seemed to like the dinosaur stories most as they engendered more active discussion. In responding to what the students liked least, it was noted that the non-Hispanic students had trouble waiting for the translation. They all seemed to learn from the experience, however, as evidenced in their recall of facts and later discussions of related experiences. Although the teacher did not know if the students had used the magazine further, she described taking it to her Spanish class as well as to her mother-in-law who does not speak English.

In addition to these very favorable reactions to this Spanish edition, the teacher noted that the magazine was different in providing more up-to-date information and that there were no similar Spanish materials in the school. The English edition of Ranger Rick also was not available in the school, but this teacher had read it several times before and liked it a lot. Given her very favorable reactions it is not surprising that she recommended its continued use, not only for 6th grade, but also for 4th and 5th grade and in Language Arts as well as Science. She thought a Spanish edition would be excellent for bilingual and ESL programs and indicated it also would be useful for their teaching of Spanish as a second language. The following quote sums up well this teacher's perceptions of the broad educational value of the magazine. "I think this could be an excellent tool. For one thing, it really created an interest in learning and improving Spanish. It is excellent as far as learning new things in Science, also for vocabulary building, listening and oral language skills."

Site visits were made to both of the participating schools. Arrangements had been made to observe the above two classes while the magazine was being used. Unfortunately, both teachers were ill the day of my visit. Instead, the principal and I met in the teachers' lounge to discuss the study, the magazine, and the population being served at the school. He expressed his enthusiasm for the magazine (he subscribes to it for his family) and the value of a Spanish issue for many of the students. He also discussed the changing population in Chula Vista. The Hispanic population has steadily increased, including many young middle-class Hispanic families, in a community formerly comprised primarily of Navy families. The school presently serves 440 to 450 students; 48% are Hispanic and 55% are of minority status. Student turnover is a problem, with approximately 25% turnover this past year. We then toured this attractive one-story school, visiting the classes where the magazine would be used. Students were actively engaged in various activities at the separate tables scattered around the room and most were eager to show the principal what they were doing. In a relaxed, friendly manner he also engaged the solitary and shy ones. Afterwards we talked with a young Hispanic 3rd-grade teacher who had seen the Spanish Ranger Rick magazine and was very favorable to it. She thought, however, the vocabulary would be too difficult for the youngsters who would be using it. As the principal pointed out, it would be more accurate to call the bilingual classes in his school "transitional" rather than bilingual.

The second school visited was a magnet bilingual school for 4th through 6th graders. (As noted earlier, the data from this school were not received.) There is also a magnet school in Chula Vista for kindergarten to third-grade students. When both magnet schools were established in response to desegregation policies, their sending districts were enlarged. There are approximately 370 students attending __________ School; 75% of them are of minority status. Most minority students are Hispanic, but there is an increasing number of Asian students and a few Black students. There are both bilingual-biliterate programs and bilingual-transitional ones (to learn English or Spanish). The __________ School is designed in an attractive one-story open-ranch interconnected style.

The neighborhood is essentially residential with houses on small lots.

Following our brief discussion over coffee, the principal invited me to accompany her to the school assembly. With children seated on the floor and staff standing or sitting beside the walls, a succession of diverse activities took place. In addition to staff and student announcements of future activities, there was the distribution of certificates of merit for superior performance on specific math functions, class and individual entertainment (e.g., square dancing, comic monologue, dramatization of a poem about a problem child with a student assisting by providing a Spanish translation). Also, one class presented a birthday gift to the principal accompanied by singing in Spanish a song traditionally sung in Mexico on the morning of a female's birthday--a song the class knew the principal liked very much. The assembly period was a very relaxed, enjoyable time for all--students, staff and visitor. Upon leaving the large room, students frequently stopped to chat with the principal--to wish her happy birthday, to share an experience, to ask to meet with her later. Several stopped to hug and/or kiss her. The principal responded with hugs, smiles, active interest, and obvious delight.

It had been arranged for me to meet with the teachers who participated in the Spanish Ranger Rick study when they shared a 25-minute free period. We met in the teachers' lounge and talked informally over coffee. All teachers were very enthusiastic about the magazine and strongly urged its continuation. They "loved" the pictures and thought it had a very good mix of stories. They felt the vocabulary level was appropriate and the translation very well done. The bilingual-biliterate program teacher said she was using it for direct teaching and for references. She intended to continue using it throughout the year. Another teacher pointed out its value in her reading class for developing dictionary skills and for studying prehistoric materials. One teacher, who has a specific animal project for use with mentally gifted 4th- through 6th-grade minority students, was particularly enthusiastic about the magazine for his classes. The teachers reported that the principal wants a book fair in the spring to obtain sufficient money for a subscription to the magazine.

The science teacher then invited me to his class to describe his program in more detail and to show his use of Ranger Rick materials. There were approximately 30 animals being cared for--in cages and in an outside yard. This teacher has paid for his own subscription to Ranger Rick for the past eight years and is very enthusiastic about the magazine. For example, he has saved aluminum cans in order to buy it. He showed me his many files on different animals, etc. that he had prepared from various issues and which were now carefully stored in cardboard containers. He praised all aspects of the magazine including the poems and games. He particularly liked the end-of-year index and hoped a Spanish one would be made available for school libraries. Given his detailed knowledge of the magazine, he offered a number of production suggestions such as using one-page features to separate articles to facilitate their filing. As he said, "The magazine is too valuable to leave together as a book; anyone doing a program in depth would separate and tear it up as I do." He thought the Teacher Guide was "great" and had fantastic activities; he had not known before that such materials were available. As I left the class, he expressed his eagerness to try out any other Ranger Rick pilot materials, even with his own funds.

When I returned to the principal's office, she reiterated her staff's enthusiasm for the Spanish Ranger Rick materials and her hope there would be further issues. She indicated her willingness to cooperate with experimental programs, and described her current emphasis on increasing math achievement. Then, cognizant of my next appointment in Chula Vista, she graciously drove me there.

This visit certainly provided an example of the rich variety of experiences a Spanish Ranger Rick magazine can provide when given an able creative staff and enthusiastic administrative support. Thus, the findings from the questionnaire responses and site visits indicated that this special edition of Ranger Rick was an enjoyable and educationally valuable experience for students with a wide range of Spanish skills. Despite difficulties in reading Spanish, students in the one school perceived the benefit of learning Spanish while learning Science also. With a more predominantly Hispanic and less advantaged population, in the other school the magazine was a welcome supplement to an already stimulating program. These positive results, however, reflect the enthusisasm, creativity, and skills of the school staff involved.

El Centro. Four schools from this small town in the Imperial Valley in Southern California approximately 15 miles from the Mexican border agreed to participate in the study. The data reported here, however, are based on only three schools since no questionnaires were received from one elementary school, although school staff reported during a telephone conversation prior to mailing the questionnaires how much their students had enjoyed the magazine. Two of the three remaining schools were elementary schools serving 434 and 474 students in kindergarten through 6th grade, and the third was a junior high school, serving 700 7th- and 8th-grade students. In both elementary schools over 80% of the students were Hispanic (81% and 85%, respectively), whereas only 56% of the junior high school students were so described. Approximately half of the students in both elementary schools came from low socioeconomic status (SES) families. In the one school, 48% of the heads of household were employed as farm laborers, and although only 10% were so described in the other school, 25% were categorized as unemployed and 18% as having unskilled, nonfarm labor jobs. The latter school, however, served a wide SES range, with 12% employed in professional or managerial positions and 24% in clerical or sales jobs. No family data were available for the junior high school. On the average, however, students in the two elementary schools performed significantly different on standardized reading tests. In the first elementary school, students were described as generally scoring one half to one grade level higher than their expected grade level, whereas in the latter school they were described as generally performing at one or more grade levels lower. The 7th- and 8th-grade students were described as performing, on the average, at grade level to one or more grade levels lower.

The three schools provided six classes for the pilot study--a 4th-grade class in one school; a 4th-grade and a combined 5th- and 6th-grade class in another; and three combined 7th- and 8th-grade groups in the third--with class sizes ranging from 17 to 33. The total number of students who responded to the Student Questionnaire was 152; 59% (or 89) of these students were in the 4th through 6th grade and 41% (or 63) were in the 7th or 8th grade. Among those who provided sex identification there was a slightly higher percentage of females overall (48% to 44%), but the two grade level subgroups differed markedly in their sex ratio. In the 4th- through 6th-grade group, 53% were identified as males and 35% as females, whereas in the older group, the percentages were 32% and 67%, respectively.

Approximately a quarter of the sample (26%) said they had seen the English edition of Ranger Rick, but 25 of the 40 students who said "yes" were in the 4th grade. Only 11 (or 17%) of the 7th and 8th graders said they had done so.

For those who said they had seen it, all but three reported seeing it in school (most (60%) only once), and three-quarters of them said they had liked it.

Ninety-one percent of the sample said they spoke Spanish in their homes, but their ability to read Spanish was much more varied. Thirty-eight percent of the total sample reported reading it "pretty well," 31% "very well," and 27% "a little bit"; only 5% said they could not read it at all. Reported reading competence, however, differed by grade subgroup and within and across schools. Approximately half (49%) of the junior high students stated they could read Spanish "pretty well," and 29% said they could read it "very well." A third of the 4th- through 6th-grade group reported they could read it "very well," but almost a third (31%) said they could read it only "a little bit." The majority of students in the one elementary school stated they could read it "very well," whereas those in the other school said they could read it "a little bit." Most students in the total group and both grade level subgroups, however, thought the Spanish in the magazine was "easy" (50%) or "neither difficult nor easy" (41%); only 8%, or 12 students, said it was "difficult." As might be expected, a higher percentage of older students replied it was "easy" (57% vs. 45%), with the reverse true for stating it was "difficult" (5% vs. 10%).

When asked if their teachers had read the magazine to them, 50% of the total sample said "no," but this varied by class within schools. Almost all the 4th graders said "yes," as did one of the combined 7th- and 8th-grade classes. Almost all the students in these same three classes also reported that their teachers had translated at least some of the Spanish, as did half the students in an additional combined 7th- and 8th-grade group. Overall, 55% of the students said their teacher translated the Spanish. In most classes only a few words reportedly were involved, but consistent with their greater difficulty reading Spanish, most of the students in the one 4th-grade class responded that half of the words were translated.

Only 21% of the students said they did follow-up activities in school. With the exception of three students from the other two schools, all those who said "yes" came from the one 4th-grade class. These 4th graders all referred to the "Search for Supersaurus" story and their visit to the museum. The three other students referred to reading different articles. Twice as many students (43%) reported doing magazine-related activities outside school. They included the same 4th-grade class, one combined 7th- and 8th-grade class, and slightly more than half of the other 4th-grade class. The overall percentages for articles and activities used are meaningless since each of the classes responded differently. Students in the one 4th-grade class repeated their earlier responses (using the "Search for Supersaurus" story and visiting the museum). Those in the combined 7th- and 8th-grade class all referred to the "Happy Bee" story; almost all replied they wrote questions and a few mentioned reading and taking a test. Only one child in the other 4th-grade class provided any additional information--stating that he/she had read. The single youth who responded "yes" from one of the other combined 7th- and 8th-grade groups said he/she had read the "Ranger Rick and His Friends" story. In addition, approximately a quarter of the sample (24%) said they had discussed the magazine with their families and/or friends. Half of the combined 5th- and 6th-grade class reportedly did so, but the others were scattered across the remaining classes. The "Search for Supersaurus" story and learning about fossils and dinosaur bones were mentioned most often (7% of the total sample), but no other article was mentioned by more than three students. Only one of the older groups listed more than one story. One youth, however, noted discussing those things with his/her family that were not understood.

When asked what they had learned from the magazine, the most frequent specific responses overall concerned learning about various scientific methods such as unearthing and protecting dinosaur bones and using solar energy (22%), story facts (20%), and various science topics and story titles (12% each). The rankings differed, however, across age groups, schools, and classes within schools. The description of various scientific methods was highest in the 4th- through 6th-grade group (35%) due to its predominant use in the one 4th-grade class; story facts was the next most frequent category for that group due to its use in the other two elementary school classes. Specific story titles were listed most often (22%) by the junior high students, followed by specific story facts and learning more about nature and animals (17% each). For both age groups, vague responses such as "learned about dinosaurs" were given most by students (26% of the total sample). Among the various other but less frequent responses provided were those that referred to learning an appreciation for conservation, poems, new vocabulary, and projects such as building dinosaur models.

In reporting what they liked best, students ranked the dinosaur article first (20% of the total sample), then the "Search for Supersaurus" story (15%), the poems (14%), and the "Ranger Rick and His Friends" story (12%). Again, responses differed by age group and within and across schools. The elementary school students listed "dinosaurs," "Search for Supersaurus," and "hedgehogs" as the three most favored articles (27%, 19%, and 13%, respectively); the junior high school students listed as favorites the poems, the "Ranger Rick and His Friends" story, and the various animal stories (30%, 22%, and 13%, respectively). But for 13 members of the 4th-grade class that had expressed the most difficulty reading Spanish there was nothing they liked. In general, though, fewer students listed anything they liked least. Seventeen (11%) said they liked everything. Overall, the feature most frequently listed as disliked was the vocabulary (17%), followed by the poems (13%), and dinosaur article (11%). However, the vocabulary was mentioned only by the one 4th-grade class, and 13 of the 17 students who specified dinosaurs were enrolled in one of the combined 7th- and 8th-grade classes. Another difference across grade subgroups was the listing of the hedgehogs article by 9% of the 4th- through 6th-grade group and by none of the 7th- and 8th-grade students, whereas 11% of the latter group mentioned the "Happy Bee" story and none of the former group did. Of course, these findings are probably due in part to differential exposure to these articles in the two grade level subgroups.

When rating the various features of the magazine, overall the pictures received the most "like" responses (61%), with stories, variety, vocabulary, and games receiving many fewer "like" choices (49%, 42%, and 41% each, respectively). Again, however, there were differences across grade subgroups and within and across schools. With the exception of the pictures the elementary school students generally rated the various features more favorably; for the pictures, however, 68% of the 7th and 8th graders vs. 55% of the 4th- through 6th-grade group said they liked them. More than half of the younger age group said they liked the pictures, stories, and variety (55% each and 51%, respectively), with 47% saying they liked the vocabulary, and 39% the games. In contrast, although 68% of the junior high students reportedly liked the pictures, less than half said they liked the other features (46%, 44%, 33%, and 30%, respectively, liked the stories, games, vocabulary, and variety). Vocabulary received the most "dislike" ratings, but this was primarily due to the one 4th-grade class; students in the other 4th-grade class gave it the most "like" ratings. Similarly, in the junior high school, classes varied considerably in their ratings for both this and other features. For example, stories, which received the second highest number of "like" ratings, also received the highest number of "dislike" ratings. It should be noted, however, in interpreting these findings that comparative percentages may be misleading since a number of students, especially those in the younger grades, did not respond to all or part of this item--perhaps because the response format was too difficult for them.

Few students responded to being queried about the difference between this issue of Ranger Rick and their usual school materials. For those who did respond, the fact that it described animals in their natural environment and was written in Spanish were the two most frequent differences noted (by 14% and 11% of the total sample, respectively). But these results were due to two elementary school classes which predominantly gave one of these responses. For the junior high students, the most noteworthy differences were that it was interesting and entertaining (19%) and was easier to read, learn, and understand (11%). ("It helps you understand things you don't know.") Included among the other differences mentioned were references to specific articles and to the fact that it was a magazine, had fewer pages, and more variety. Several students in the combined 5th- and 6th-grade class commented that it was the first time they had magazines and "because there are not many magazines in Spanish." Some of the older students, however, found it more boring than their other school books, although it should be noted that students in the same class expressed the exact opposite.

In general, most of the students (78%) expressed their desire to continue receiving the magazine. The difference between age groups, however, was striking. Ninety-two percent of the 4th- through 6th-grade group said "yes," whereas only 59% of the 7th- and 8th-grade group did. Fourteen percent of the latter group also said they did not care either way. In examining the data by class, however, only one combined 7th and 8th grade was negative toward the magazine. In no other class in the sample did more than three students state that they did not want to continue receiving it. More students overall (36%) and in both grade subgroups expressed a preference for receiving the magazine in both Spanish and English. A single Spanish edition received the next most votes (26%), with 17% overall requesting it be in English only. For the younger students, Spanish and English only versions received approximately an equal percentage of choices (27% and 26%, respectively), whereas for the 7th- and 8th-grade students the percentages differed considerably (24% and 5%, respectively). These findings are consistent with the earlier reported results regarding differences in students' abilities to read Spanish. The majority of students overall (54%) and in both grade subgroups also preferred to use the magazine in school. This was especially true for the elementary school students (64% vs. 40%). Of course, the lower percentage for the older group reflects in part the smaller percentage of students who said they wanted to continue receiving the magazine. Some students gave as a rationale for their choice more time to read, the opportunity to learn more, and the chance to learn more Spanish.

This sample of El Centro students also recommended that future issues of the magazine be used in kindergarten through 8th grade. Consistent with their greater representation, the most recommended grade levels were 5th, 4th, and 6th (51%, 47%, and 46%, respectively), followed by the 7th and 8th grade (36% and 29%). However, not all classes gave their own grade level the highest priority. Students in two of the combined 7th and 8th grades recommended the magazine be used most in lower grade levels and one 4th-grade class recommended that it be used in the higher grade levels. These findings are consistent with the relative ease and difficulty students in these classes had experienced with the magazine. Also, although their reaction was generally favorable, slightly more than half of the students (55%) said they would like changes to be made in future issues. Those changes mentioned most concerned the poems (15%) and the games (12%). For some students the games were too hard or not interesting enough; others wanted more or a greater variety of them such as the addition of crossword puzzles. A third of the students in the 4th-grade class that experienced the most difficulty reading the magazine expressed their desire to have the magazine in English. Nine percent of the students referred to the pictures, with most requesting there be more of them. Five percent of the total sample, but 10% of the older students, wanted the magazine to be expanded with more stories, pictures, and a greater variety of animals and activities.

Additional comments were made upon completing the questionnaire by one to all members of a class. Most expressed how much they enjoyed reading the magazine and hoped to continue receiving copies. Some reiterated their specific likes or dislikes and/or suggested changes. The following comments from different schools and grade levels exemplify some of the more specific statements made. "I used it in the lecture period in silence and it seemed very interesting because it taught things that I didn't even imagine existed and I think it's very useful." "I used the magazine at home as something to entertain myself and there was nothing I disliked, only that it's good for us." "I use it to understand the things it explains. It's good because it helps me learn and know about things of the world." "I liked it because it has pictures, beauty, and interesting things." "With more activities and more stories and poems. I liked them a lot and wish to study them because we learn to read and write." "I liked the 'Happy Bee' because it was very interesting and the poems because they were very beautiful." "I think that it helped us to help animals and take care of them." "It was very interesting. My classmates and I know words we didn't know or understand and looked them up in the dictionary, but it was very interesting and I used them over and over again." "I think the magazine has to be printed because it's the only one in Spanish."

Two School Questionnaires were received; one completed by a teacher in one of the elementary schools and one by the junior high school principal. Both were very familiar with the English edition of Ranger Rick and liked it a lot. One respondent had a subscription for his/her children. Although available in the elementary school library, it was not available in the junior high school. The various features of the present issue were rated as "liked very much" by the junior high school principal. Although not speaking Spanish himself, he reported that the teachers had told him that they liked the Spanish version very much. The elementary school teacher said he/she liked the interest level of the stories and the pictures very much, liked the vocabulary and variety, but disliked the games. When asked what they liked most, the teacher said, "As usual the pictures were excellent and the stories interesting"; the principal succinctly stated "Spanish." Although the latter noted nothing as liked least or recommended any changes, the elementary school teacher said the games were "difficult and dull" and suggested they be changed. Both respondents had discussed the magazine with their students and reported they also enjoyed it.

Although they indicated there were no similar Spanish materials in the school, the principal noted that school staff visit nearby Mexicali in Mexico to purchase relevant materials. Given the enthusiastic reaction they and their students had to the magazine and a perceived need for additional Spanish materials, they both recommended its continued use. The elementary school teacher recommended it for 5th- and 6th-grade students in Language Arts, Science, and Spanish, and responded that it "would be well received by the student and would be of value in teaching Science." Also, he/she perceived its potential value for the bilingual programs in the Spanish component of the science program, but thought it would be of lesser value for the ESL program. The junior high school principal recommended its continued use for 7th- and 8th-grade students in Spanish classes as well as for those in the bilingual, ESL, or transitional programs. He enthusiastically stated, "We would use a Spanish edition. My teachers say it would be valuable and that they would use it." In a later comment he added, "My teachers enjoyed this edition. We would order Spanish copies and use them. Do it!!"

Teacher Questionnaires were completed for all six participating classes. In reporting the results, I have separated those from the elementary school and the junior high school. As will be noted, there was considerable variation within these groups in students' skills and attitudes as well as in teachers' uses and attitudes toward this edition of Ranger Rick.

In the one elementary school only 56% to 70% of the 4th-grade students were described as Hispanic and as speaking Spanish in their homes; in the other school at least 86% were Hispanic in both the 4th-grade and combined 5th- and 6th-grade classes, although a slightly lower percentage (71% to 85%) of the older group were described as speaking Spanish in their homes. In the first school, 80% of the 4th graders were rated as speaking Spanish "very well" or "pretty well" (40% in each category), 50% were described as reading it "pretty well," and 43% "somewhat," but the majority (83%) were rated as able to write it only "somewhat." In contrast to students in many other participating classes, they were more proficient in English. Although the class comprised an equal percentage of students who spoke English and Spanish "very well" or "pretty well" (40% each), a majority also were rated as reading and writing English "very well" or "pretty well" (30% and 35%, and 20% and 35%, respectively). In the other elementary school, 22% of the 4th-grade students were rated as speaking Spanish "very well" and 64% as "pretty well", 53% were rated as reading it "pretty well" and 33% as "somewhat", and 66% were described as writing it "hardly at all." With the possible exception of writing skill, they were somewhat less proficient in English, with 14% and 39% rated as speaking and reading English "very well" or "pretty well," respectively, and 52% able to write it "somewhat" or "hardly at all" (26% each); however, the teacher was unable to rate 18% of the students on their writing skill. The students in the combined 5th- and 6th-grade class reportedly had similar Spanish speaking and reading skills (25% and 50%, and 30% and 40% were rated as speaking and reading it "very well" and "pretty well," respectively), but they were somewhat more advanced in their Spanish writing skills than the 4th graders as 10% and 30% were rated as writing "very well" and "pretty well," respectively, and only 40% as "hardly at all." Similarly, 50% were rated as speaking and reading English "very well" or "pretty well" (20% and 30%, respectively for each), with parallel percentages of 10% and 30% obtained for proficiency in writing English. Students in both 4th-grade classes were enrolled in bilingual programs; the 5th- and 6th-grade students were in an ESL program.

For the one 4th-grade class the magazine was used for more than 90 minutes during Social Studies and Language Arts periods. The teacher read five of the articles, including the two on dinosaurs since they were currently studying them. Half of the words had to be translated as well as the general ideas for the non-Spanish speaking students in the class. In the other school, the 4th-grade teacher spent 61 to 75 minutes during Spanish periods. The students read the "Build a Boxosaurus" and puzzle pages, and the teacher read the remaining articles, translating a few words as needed. This teacher commented, "I wanted to see what motivated students more. I wanted to see their reactions and participation in the discussions." The combined 5th- and 6th-grade group used the magazine for 61 to 75 minutes during a morning reading period and the 6th-grade students also used it in an afternoon Social Studies class. The students read the "Search for Supersaurus" and hedgehog stories in front of the class; the remaining articles were used by the students on their own. The teacher reported translating a few of the words. Both 4th-grade teachers used the Activity Guide, the "Diversion con fosiles" and "Recorrido por el museo" in one class and as background information in the other, and found the Guide at least somewhat helpful. Each teacher, however, recommended changes--the inclusion of more suggestions and that it be geared to the Language Arts program.

Each of the teachers had different preferences. One especially liked the detailed information on removing anthropological discoveries from the ground; another liked most the way the subjects were presented; and the third thought the pictures were "great" and the subjects of high interest. They also indicated different magazine features as liked least. One 4th-grade teacher specified the vocabulary because "it became very tedious when you had to translate practically every other word." The other 4th-grade teacher listed the poems, and the teacher for the combined 5th- and 6th-grade group thought the puzzles were very difficult, unattractive, and dull. In rating the various magazine features, all three teachers said the vocabulary was difficult and "somewhat inappropriate." One 4th-grade teacher thought the story topics also were too difficult and, therefore, "somewhat inappropriate," but the other two teachers rated them as "appropriate" and interesting. Although both 4th-grade teachers described the games as "appropriate," with one noting that they were exciting, the teacher for the older class reiterated that they were difficult and dull and rated them as "very inappropriate." All three teachers found the pictures very attractive, with two rating them as "very appropriate" and one as "appropriate."

Based on these reactions, the three teachers had various suggested changes for future issues. Despite the difficulty experienced with the vocabulary, the one 4th-grade teacher was uncertain if the vocabulary level should be changed. "I'm not sure because if the vocabulary were to be changed to accommodate the limited vocabulary of the children they would never be exposed to the rich Spanish vocabulary it now contains." The other 4th-grade teacher, however, thought some of the expressions in Spanish should be changed as well as the names of the characters because it was difficult for the limited-English students to pronounce them. In addition to more simplified vocabulary, the teacher for the 5th- and 6th-grade students recommended more attractive and easier puzzles and fewer or no spelling errors.

In describing their students' reactions to the magazine, the one 4th-grade teacher noted that the students "loved the pictures and stories, seemed quite interested, asked many questions and told of their own experiences that they thought paralleled the stories." In addition, "they were attentive and curious at the museum." The teacher for the 5th- and 6th-grade students also reported that they were actively engaged, and, based on their discussions, appeared to like the pictures and choice of subjects most. Although the other 4th-grade teacher also reported that the students liked the pictures most, they were described as only somewhat engaged because the reading level was somewhat difficult for them. Despite the enthusiasm and involvement described for the one 4th-grade class, that teacher also noted that the students became frustrated at not being able to follow the reading by themselves. Not surprisingly, given earlier comments, the students in the combined 5th- and 6th- grade class were described as liking least the puzzles. Only the students in the one 4th-grade class were described as doing further follow-up activities. "They loved to look at the pictures and they tried to do the art projects alone." All three teachers, however, viewed their students as having learned from this relatively brief exposure to the magazine as evidenced by their interest in the stories ("and that makes good learning"), their greater awareness of nature, and the comprehension and retention displayed in their discussions.

Both schools reportedly had the English edition of Ranger Rick in the library, but there were no similar Spanish materials in the schools. The teachers in the one school viewed the present Spanish issue of Ranger Rick as somewhat different from their students' regular school materials because of the subjects covered and because the students "are not much acquainted with nature." The 4th-grade teacher in the other school used a very different basis for rating the magazine as "very slightly" different. "It sounds like someone their own age having these experiences which makes it easier for them to relate to than when you read it out of a book. This keeps the children's attention for a longer period of time."

In commenting on its educational value, the one 4th-grade teacher replied, "It could be very useful, but they must be used with a great deal of guidance.

Children get lost in the vocabulary quite fast because most of these children who come to school speaking mostly Spanish have a very limited vocabulary; they have seldom been exposed to the vocabulary found in books. They usually use the least sophisticated words that are necessary for communicating." The other 4th-grade teacher noted, "It's a great edition for students whose reading level is good"; and the third teacher stated, "It would be of value as motivational and enrichment material." When asked to comment on the potential use of a Spanish edition of Ranger Rick in bilingual, ESL, or other instructional programs, the one teacher said, "I would like to have the same magazine in both languages so that we could use it (in bilingual programs) for Social Studies, Language, and Science. In ESL programs I would use it in English to teach the children vocabulary and expression." In the other school the 4th-grade teacher thought it had low potential use for bilingual programs and very low potential use in ESL programs. He/she added, however, "I would like to see a magazine like Ranger Rick in Spanish at a lower reading level (easier to comprehend). It's a very good magazine. Very interesting." The teacher for the combined 5th- and 6th-grade class noted that the bilingual programs in that school were mainly in the lower grades and those students would be unable to read at the level of the magazine. Thus despite their general favorable reaction to the magazine itself, only the one 4th-grade teacher from the higher academic achieving school recommended its continued use--for 4th-grade students in Language Arts, Science, Spanish, and Social Studies. Even this recommendation was modified to state, "If the vocabulary continues to be as difficult, I would move it to higher grades." The other 4th-grade teacher responded, "No, because it was too hard," and the teacher for the combined 5th- and 6th-grade group was uncertain. From the comments described, an edition with simplified vocabulary would have been endorsed by these teachers also.

Teacher Questionnaires were completed for the three combined 7th- and 8th-grade classes from the junior high school. In two of the classes, at least 86% of the students were Hispanic and spoke Spanish in their homes; one of these was an ESL class and one was comprised of students in a transitional program. The third class consisted of limited English-speaking transitional students, 71% to 85% of whom were Hispanic, but a much smaller percentage of them (25% to 40%) reportedly spoke Spanish in their homes. Less than 25% of this class were in a bilingual or ESL program. All of the students in the first two classes were described as speaking Spanish "very well"; all of the students in the transitional class and 75% of those in the ESL class also were described as reading and writing Spanish "very well." Students in the limited English-speaking class were rated as speaking and reading Spanish "pretty well" and writing it "somewhat." The English language skills of the students in these three classes were reversed. All of the ESL students were described as speaking, reading, and writing English "hardly at all." Although 85% of the transitional program students were rated as speaking and writing English "somewhat" (50%) or "hardly at all" (35%), 75% reportedly could read English "pretty well." Students in the limited English-speaking class, however, were described as speaking and reading English "very well" and writing it "pretty well."

Given differences in student and teacher characteristics, the magazine was used differently in the three classes. For the transitional program students, 30 to 45 minutes were spent during a Spanish class. Apparently the students used the entire magazine on their own and no translation was provided. Six of the articles were read to the ESL class over more than a 90-minute interval. Their teacher noted that the students expressed interest in having these parts read orally during the regular reading program. He/she commented, "Ordinarily we do not read Spanish materials during reading period in our ESL class. We did this to better fill out the questionnaire." Again, no translation was provided. More than 90 minutes were also spent with the magazine for the limited English-speaking students. The teacher read three of the articles (the two on dinosaurs and the one on solar energy) during Spanish class and translated a few words. None of the teachers used the Activity Guide.

One teacher did not respond to what he/she liked most, but one of the other teachers mentioned the dinosaurs, and the third one said he/she especially liked the way in which facts and concepts were presented. None of them indicated anything they liked least, but the ESL teacher suggested that lower level vocabulary be used in some sections since some students found the vocabulary a little difficult. In rating the various magazine features, the ESL teacher indicated all were "appropriate" for most of the students; the teacher for the transitional students found the vocabulary difficult and therefore "somewhat inappropriate," but rated the remaining features as "appropriate"; and the teacher for the limited English-speaking students rated both the vocabulary and pictures as "very appropriate" and the topics and games as "appropriate."

All the teachers described their students as actively engaged when the magazine was used. Two did not specify what their students seemed to like most or least, but the ESL teacher reported that the students said they liked the many interesting stories, although a few had trouble with the vocabulary and refused to read orally in class. Only one teacher said the students did further magazine-related activities, but these were not specified. All the teachers also perceived their students as having learned from the experience, but only the one teacher elaborated further--"they found the stories interesting and told their parents about them."

None of the teachers knew if the English edition of Ranger Rick was in their school nor had any of them read it before. Also, none of them were aware of any similar Spanish materials in the school. They all viewed the present Spanish issue of Ranger Rick as "very" to "somewhat different" from their students' usual school materials, with one teacher explaining that "the approach for presenting information is different and appealing to most students."

Although the ESL teacher was uncertain about recommending its continued use, the other two teachers recommended that it be continued in 7th and 8th grade, with one teacher specifying its use for Science and Spanish classes. This same teacher commented, "It would be a new experience for most of these students, but at least they'll get exposed to something different." The ESL teacher responded, "Instruction as well as materials in an ESL class must be in English since it is the use of the English language that we are trying to teach. The English edition would be too difficult for our ESL students since the vocabulary we use is a controlled vocabulary." Commenting later, however, he/she did indicate some potential educational value of a Spanish edition of Ranger Rick for these students. "We have a 15-minute period set aside in our school for silent reading. The ESL students, of course, must read materials in Spanish since they are very limited in English. The Ranger Rick magazine serves this purpose."

A site visit was made to the junior high school in El Centro since it was the only school in the Imperial Valley sample that served upper-elementary grade students. Upon arriving at the school, the principal met with me briefly. He was very enthusiastic about the program, but said he did not want to discuss specific reactions since he felt the teachers and students could do that better. He then brought me to one of the participating classes which was located on the second floor. While the teacher continued working at the board, he introduced me to the Hispanic aide sitting in the back of the room and explained the purpose of my visit. Also, he asked her to accompany me later to the ESL class since many of the students in that class were recent arrivals from Mexico and had very limited skills in English.

After he left, the teacher concluded the lesson and came over to introduce herself. Since the principal had previously informed her of my visit, she introduced me to the class and explained the purpose of my visit. As I asked the 23 7th-grade students present about their experience with the magazine, several students took their copy of the magazine out to review. The students expressed their pleasure in the various stories (particularly the dinosaurs) and pictures. They also said they liked the games and did not find them difficult to do. Several, however, admitted to having difficulty reading the magazine, and there was general consensus that future issues should be in both English and Spanish.

Following my discussion with this class, the aide brought me to an ESL class for 7th- and 8th-grade students. Since the teacher was home ill, the class was being supervised by a young male teacher with limited Spanish skills. After introducing myself and explaining the purpose of my visit, I asked for general comments and reactions. Several students offered facts that they had learned, and a male student described one of the stories in detail. This class, too, particularly enjoyed the articles about dinosaurs. They reported having no difficulty with the Spanish vocabulary and were enthusiastic about having the magazine available in Spanish. In later discussion with the aide, she explained that these students, in contrast to the previous class visited, were recent arrivals from Mexico and were fluent in Spanish. Given the rigorous curriculum in most Mexican elementary schools, they were advanced in both oral and reading skills. Consequently, she predicted they would have little difficulty learning English and there was no "danger" in having them continue to be exposed to Spanish materials. The students in the other class, however, had been in this country for all or most of their school years and had limited Spanish reading skills even though they could comprehend Spanish when spoken.

Before leaving (deleted) Junior High, I met again briefly with the principal. He reiterated his very favorable reaction to the magazine and the pressing need for such curriculum materials. He described the frequent trips by teachers across the nearby Mexican border to buy school texts, etc., in Spanish ("I'll get them wherever I can.") and noted that Spanish science materials, in particular, are essentially nonexistent for bilingual programs. In closing, he said, "Just tell National Wildlife we're ready as soon as they are. When they announce another Spanish issue, just include an order form with the announcement."

Results from the questionnaire responses and site visit interviews indicated that students and staff in this small California town generally found the magazine enjoyable and useful. Some of the elementary school students, however, found the vocabulary too difficult, and their teachers did not recommend continued use of a Spanish edition. Some junior high school students found the magazine more appropriate for younger students, but most were actively engaged when it was presented and desired to continue using it. As the site visit report indicated, the junior high principal strongly endorsed its continuation due to the lack of appropriate science materials for Spanish-speaking students.

As noted earlier, El Centro is approximately 15 miles north of Calexico. The differences in the receptivity and use of a Spanish edition of Ranger Rick in these two sites in part reflect the difference in the percentage of Hispanic families in the area (45% in El Centro vs. 90% in Calexico) and the very different sociocultural context. El Centro is a growing industrial area with businessmen flying in daily to the local airport. The emphasis on English competency for employment differs, therefore, from Calexico where business people must deal daily with the large number of Mexican visitors.

Long Beach. The Assistant Director of Research for the Long Beach Unified School District assisted us in locating schools to participate in the study. The resulting Long Beach sample comprised students from two elementary schools in this urban community neighboring Los Angeles. One school served 920 students, 53% of whom were Hispanic, in pre-kindergarten through sixth grade. They were described as generally performing at one-half to one or more grade levels below their expected grade level on standardized reading achievement tests and as coming from families whose household heads were employed in skilled or unskilled, nonfarm labor jobs (40% each). The other school also comprised students in pre-kindergarten through sixth grade, but figures on enrollment size and percentage of Hispanic students were not provided. On the average, students were described as performing at one-half to one grade level below national norms on reading achievement tests, and most came from very economically disadvantaged families (60% of household heads were in unskilled, nonfarm labor jobs, 5% were farm laborers, and 15% were unemployed).

Forty-four students from these two schools responded to the Student Questionnaire. Three groups participated from the one school--a 5th grade, a 6th grade, and a combined 3rd- and 4th-grade group of 8, 12, and 13 students, respectively. Only one combined 4th- and 5th-grade class of 11 students participated from the second school. Based on the 40 students who provided sex identification information, 53% of the sample were females and 39% males. The predominance of girls was primarily due to one class with eight of eleven students female. Half of the sample said they had seen the English edition of Ranger Rick, and 19 of these 22 said they had seen it in school. Ten of them reported seeing it only once, with five seeing it two to four times, and the remainder five or more times; all but one said they liked it. With the exception of one student, the 22 students came from three of the four study classes, and the five who mentioned seeing it at home all came from the same combined 4th-and 5th-grade group.

Approximately three-quarters (73%) of the students said they spoke Spanish at home, but only 53% said they could read Spanish "pretty well" (30%) or "very well" (23%). Thirty-nine percent said they could read it "a little bit," and 7% said they could "not read it at all." As might be expected, the majority of those who reported that they could read it very well were in the 6th-grade class, and the three students who said they could not read it at all were in the two youngest groups. Similarly, 45% of the students reported that the Spanish in the magazine was "easy," 30% that it was "neither difficult nor easy," and 23% that it was "difficult." Although seven of the ten who found it difficult were in the two youngest groups, 14 of the 20 who said it was easy also were in these same two classes. In only the youngest class did the teacher reportedly read the magazine to all the students, and for this same class and also the 6th-grade class the teacher reportedly translated at least some of the words.

Approximately half of the students (48%) said they did further magazine-related activities in school; these 21 students comprised the entire combined 3rd- and 4th-grade group, three-fourths of the 5th-grade class, and two students from the combined 4th and 5th grade. They all used different parts of the magazine and did different activities, however. The youngest students all referred to the "Green Velvet Princess" story and said they drew pictures; the 5th-grade students referred to the "Search for Supersaurus" story and reported looking at fossils; and the two students from the combined 4th- and 5th-grade group said they read the "Ranger Rick and His Friends" story. Only two students (or 5% of the sample) said they did further magazine-related activities outside school, with the one student saying he/she had read all the book and the other not providing further information. Also, only five students (or 11% of the sample) stated they had discussed the magazine with their families and/or friends. The two from the youngest group indicated the "Green Velvet Princess" story; only one of the three 6th-grade students responded further and that youth said that he/she had discussed "where I read."

In describing what they had learned, 27% of the students listed specific facts, whereas 14% only reported story titles or topics. Nine percent each said they learned about nature and animals and/or about scientific methods, and 7% referred to conservation. A few students mentioned learning about scientific topics such as solar energy and fossils, being motivated to read and learn more, and learning to care for animals and not to be afraid. One student also mentioned learning new words. Most students (34)%, however, gave vague responses such as "I learned a lot." All of the combined 4th- and 5th-grade group commented on how much they had liked their experience with the magazine. Some different responses in the "other" category were: "I learned not to be afraid when someone wants to be your friend," and "I learned that it's fun to read." As might be expected, the 6th graders listed more story facts and the youngest group gave the most vague responses.

When asked what they liked most, the "Green Velvet Princess" and "Ranger Rick and His Friends" stories were mentioned most (by 20% and 18% of the sample, respectively). Eight of the nine students who selected the "Green Velvet Princess" story, however, came from the combined 3rd- and 4th-grade class, whereas "Ranger Rick and His Friends" was mentioned in the three other classes. In the various classes numerous other articles or features received one or two votes. When asked what they liked least, the most common response (by 36%) was "I liked everything." The next most frequent response, the "Search for Supersaurus" story, was given by only four 5th-grade students (or 9% of the sample), followed by the "April Foolers" and hedgehogs articles (7% each). With the exception of the "Search for Supersaurus" story, no category was mentioned more than twice in any class. Since one class did not rate the various magazine features, and seven additional students did not respond to this item or gave indeterminate responses, percentages based on the total sample would be misleading. For the 31 remaining students, 74% said they liked the stories and pictures; the vocabulary, variety, and games were liked by 51%, 48%, and 45%, respectively. Although the photographs were checked as "liked" by all students who responded and the stories received only one "dislike" rating, the vocabulary and variety both received four "dislike" ratings, and the games, seven. In commenting on differences between the Ranger Rick magazine and their other school materials, the students noted most the inclusion of particular articles such as the dinosaur stories, the focus on nature and animals, the colorful pictures, use of Spanish, attractive format, and their enjoyment with it. Also noted were the magazine's variety and size.

Approximately three-quarters of the students (73%) expressed their desire to continue receiving the magazine, with another 11% who said they did not care. An approximately equal percentage of the total sample preferred to receive it only in English or Spanish (32% vs. 30%, respectively); 14% expressed a preference for receiving it in both languages. Most of the "English only" choices however, were made by the youngest group which also had expressed the greatest difficulty reading Spanish. More students preferred to use Ranger Rick in school rather than at home (48% vs. 34%), and this was generally consistent across classes. Only four students said they would like to see changes made in future issues. Two in the youngest group wanted it easier, one student wanted the hippopotamus picture deleted, and the other did not specify the desired change.

In addition to their generally favorable reaction to the magazine and their desire to continue receiving it, at least two students recommended it be used in each of the elementary school grades. Their own grade levels, however, were recommended most, with the 4th, 5th, and 6th grade recommended by 45%, 36%, and 34% of the students, respectively. Their additional comments after completing the magazine reiterated their enjoyment, with many expressing their appreciation for receiving the magazine. Two students who were articulate in English also commented: "My sister is learning Spanish and she tried to read it. It was a good learning experience for her"; and "I think this Spanish edition of Ranger Rick is a good idea for Spanish people."

School Questionnaires were completed for both schools, one by a teacher and the other by the school's bilingual specialist. Both indicated that the English edition of Ranger Rick was currently in their schools. One school had it in the library and the other was using two issues in the primary grades, but only the one respondent had read it before (at least five times in school and had liked it a lot). The one teacher liked all the various features very much; the other teacher liked the pictures very much and also liked the variety and interest level of the stories, but he/she disliked the vocabulary and games as being a little too difficult and requiring a little too much specialized vocabulary, respectively. The one teacher liked most the stories and pictures and did not comment on anything liked least or on desired changes. The bilingual specialist liked most the "good variety of articles" and the "high quality translation," but noted, "For our students (inner city) the ideas were good but the vocabulary needs to be a little easier." He/she also suggested the addition of activities to help reinforce the scientific vocabulary presented. Both teachers had discussed the magazine's use with the students and reported that they, too, liked it.

Although the one teacher noted there were no similar Spanish materials in the school, the other teacher referred to the use of El Informador, a Spanish-English newspaper from San Diego which, though different from Ranger Rick in content, was similar in use as supplementary material in Spanish. Both viewed a Spanish edition of Ranger Rick as having educational value, the one succinctly stating "excellent," and the other elaborating that it provides "educational materials in Spanish to help develop concepts and vocabulary in (the student's) primary language." The bilingual specialist perceived its potential as supplementary material for bilingual but not ESL programs. "ESL is English. Spanish Ranger Rick is for bilingual situations." The other teacher noted that the magazine would be very good for children in monolingual Spanish programs, especially in the upper grades. "There is a very limited amount of good reading and science materials." In general, then, these teachers were very positive in their reaction to the magazine (one to the extent of requesting information on obtaining a subscription) and recommended its continued use at several grade levels and in different subject areas. The one teacher recommended it be used in 3rd- through 6th-grade Language Arts and Science, and the other that it be used not only in those two subject areas, but also in Spanish for 4th- through 6th-grade students.

All the participating teachers completed the Teacher Questionnaire. The information they provided indicated diversity within and across schools in students' Spanish and English competencies and in the extent and manner of the magazine's use.

In the school with three participating classes, at least 86% of the students in the combined 3rd- and 4th-grade group were described as Hispanic and as speaking Spanish in their homes. They were rated as speaking Spanish "very well" and reading and writing it "somewhat," but as speaking English only "somewhat" and reading and writing it "hardly at all." All were in bilingual, ESL, or transitional programs. All of the students in the 5th-grade class were Hispanic and reportedly spoke Spanish in their homes. These students were described as speaking Spanish "very well," reading it "pretty well," and writing it "somewhat" to "pretty well." They all were enrolled in a bilingual and/or transitional program. In contrast, only 56% to 70% of the 6th-grade class comprised Hispanic students and fewer reportedly spoke Spanish in their homes (41% to 55%). Consistent with these data, although 60% were rated as speaking Spanish "very well," 30% were described as speaking it "hardly at all." Also, only 30% were described as reading it "pretty well" and 50% "hardly at all." Ninety percent reportedly could write it only "somewhat" or "hardly at all" (60% and 30%, respectively). Similarly, they were described as more proficient in English than were students in the other two classes. Sixty percent reportedly could speak it "very well," and 50% and 30%, respectively, could read and write it "pretty well." There were those, however, who could hardly perform any of these skills (20%, 30%, and 30%, respectively).

The teacher for the youngest group used it during Science for 61 to 75 minutes. He/she chose to read the "Green Velvet Princess" story because it was "easier and organized enough for me to want to use it in a lesson," and translated a few words. In the 5th-grade class it was used by the bilingual specialist for Spanish reading. More than 90 minutes were spent on five of the articles, but none were read by the teacher nor any of the words translated. It was also used during Reading period for the 6th-grade group, with 46 to 60 minutes spent on the "Sea Poems" and "Ranger Rick and His Friends" story. The students read these articles by themselves with no translation by the teacher. None of the teachers used the Activity Guide, but one requested that it be revised to pertain more to indoor class activities.

All three teachers said they liked best the photographs; one also mentioned the articles. The teacher for the youngest group liked least the difficulty level and recommended that the magazine be made easier. One of the other teachers mentioned the scientific vocabulary and the third commented that some translations of names seemed awkward (e.g., Dinosaurios Jim), but neither of these teachers recommended any changes. In rating the various magazine features, they all stated the vocabulary was too difficult and rated it as "very" or "somewhat inappropriate." The games also were viewed by two of the teachers as "somewhat inappropriate" ("over their heads"); the third teacher did not rate them. The story topics were described as too hard and therefore "somewhat inappropriate" for the youngest group, but the other two teachers rated them as "appropriate." All rated the pictures as "very appropriate."

The students in all three classes were described as actively engaged when the magazine was used and as liking most the pictures. ("They [the photos] were easy to look at and pretty"; "The pictures really sparked their interest to read more about the article.") The 5th-grade teacher also noted that the students especially liked the "Search for Supersaurus" article as reflected in their comments. Only the 6th-grade teacher mentioned anything the students liked least--the vocabulary because it was very difficult for them to read. However, this class was also described as doing further independent reading. The three teachers all perceived their students as having learned from the experience as exemplified by their recall of facts, interest in animal stories, and the pictures they drew to describe a butterfly's life cycle.

Two teachers described Ranger Rick as "somewhat different" from the students' usual instructional material, one because it "dealt with specifics and we work with generalizations in nature," and the other because "we have a need for supplementary reading material in Spanish, Science, and Social Studies." The third teacher did not respond to this item. Although the English edition of Ranger Rick was in the school being used in the primary grades and all three teachers had read it at least several times, with two of them liking it a lot and one a little, they reported no similar Spanish materials in the school. In response to the generally favorable reaction they and their students had to this Spanish edition of Ranger Rick, they all recommended its future use at several grade levels in different subject areas. Their responses varied, however, in part apparently due to the different age levels and subjects taught. The teacher for the youngest group recommended it be used for Language Arts and reading Spanish in grades 2 through 4; the 5th-grade teacher recommended it for 4th- through 6th-grade Language Arts, Spanish, and Science classes; and the 6th-grade teacher recommended it be used with 6th-, 7th-, and 8th-grade students in Language Arts and Science. In describing its potential educational value, they commented: "This is great, but very difficult. If you make it easier, I can use it in the bilingual program"; "I would like to have copies each month"; and "It is a high quality, high interest magazine with intellectual content that can be used to develop the reading and thinking skills of the students. It can provide supplementary reading and science for bilingual programs."

The bilingual teacher in the other participating Long Beach elementary school described a different student population. Only 25% to 40% of the students in this combined 4th and 5th grade were Hispanic and spoke Spanish in their homes. Fifty percent were described as speaking Spanish "very well," but only 25% as reading and writing it that well. Although 40% were rated as speaking, reading, and writing English "very well," another 30% could perform these skills "hardly at all." This teacher used Ranger Rick during Language Arts, Science, and Spanish with monolingual Spanish students to read on their own. Five articles were used over several periods comprising more than 90 minutes; no translation was done. This teacher, too, did not use the Activity Guide, but he/she suggested that some activities be included that children could do independently in the classroom.

This teacher was very enthusiastic about the magazine and liked most that it provided good material for monolingual Spanish children. There was nothing he/she liked least, and no changes were suggested. With the exception of the games which were rated as "somewhat inappropriate," the other features were rated as "very appropriate." The students also were described as liking the magazine. They reportedly were actively engaged when it was used and appeared to like the stories and pictures best. ("I saw students reading the stories and smiling at the pictures.") The teacher said he/she did not know what they might have liked least. The students' recall of facts also provided evidence to the teacher that they had learned from the magazine.

The teacher viewed the magazine as "very different" from the students' regular school materials since it provided good science material. Although the English edition of Ranger Rick was available in the library, he/she had not read it and liked the present issue a lot, "especially since it's in Spanish." Given the lack of similar Spanish materials in the school and the enthusiasm for the Spanish edition of Ranger Rick, this teacher strongly recommended its future use in 4th-, 5th-, and 6th-grade Language Arts, Science, and Spanish classes. He/she viewed its potential educational value as excellent because monolingual Spanish students need good reading and science materials ("There is a very limited amount of such materials (especially science) for the new arriving students in upper grades"). The teacher's enthusiasm for the magazine also was evidenced in the comments made at the completion of the questionnaire. Not only did he/she wish to order a subscription for the class, but volunteered any further help we might need from a bilingual classroom.

For the Mexican American students and their teachers in this urban California community, the Spanish edition of Ranger Rick was not only generally enjoyed, but apparently helped serve a definite need for appropriate science materials while providing useful supplementary material for other subject areas. The large differences in Spanish literacy, however, suggested the need for a broader range of vocabulary level in future issues. A similar greater breadth in the complexity of story topics and activities also was suggested.

Los Angeles. Three Los Angeles schools participated in the study: two elementary schools and one junior high school. Although site visits were made to all three schools, responses to the questionnaires were obtained from only one school. This school, an elementary school in the northeast area of Los Angeles, at the time of the study served 890 students in kindergarten through 6th grade, 87% of whom were Hispanic. Although no statistics were provided on their families' socioeconomic backgrounds, the principal had noted during the site visit that there is considerable transiency among the school population since this neighborhood is a "stopping off" place for many arrivals to Los Angeles. Students were described as performing one-half to one grade level lower than their expected grade level on standardized reading achievement tests.

Two classes participated: one a 4th-grade class with 20 students and the other a 5th-grade class with 23. There were more girls in both classes (53% of those in the total sample who identified their sex were girls and 44% were boys). Only two students, both 5th graders, had seen the English edition of Ranger Rick before. Both said they saw it in school, but they did not indicate their frequency of use or whether they liked it. All but two students reported speaking Spanish in their homes, but only 28% described themselves as reading Spanish "very well"; 35% said they read it "pretty well," 23% "a little bit," and 14% "not at all." Although 63% stated that the Spanish in the magazine was "easy," 26% found it difficult, and 12% said it was "neither easy nor difficult." Despite these similar patterns in both classes, in one class (the 5th grade) the teacher read the stories to the students, and in the other one he/she did not. In both classes, the teacher translated at least some of the words; the 4th grade reported their teacher translated most of the words, whereas the 5th-grade class gave varied amounts, with most responding that only a few words had been translated.

Only three students in the sample said they did any further activities in school, and they did not elaborate further. Similarly, few students (six 5th graders) reported doing any further work outside school, but with the exception of two students, no further specification was provided. One of these two students referred to the dinosaur story and the other described the experience of seeing a fox in the mountains near his house. Eleven students, or 26% of the total sample, said they discussed the magazine with families and/or friends. The most frequently mentioned articles were the dinosaur and the "Green Velvet Princess" stories.

When asked what they had learned, all the 4th graders provided story facts, whereas the 5th-grade group mentioned learning about solar energy and scientific methods. Several in this 5th-grade group, however, said they had learned nothing. When asked what they liked most, the articles on solar energy, and the "Search for Supersaurus" and "Green Velvet Princess" stories were mentioned most (by 37%, 26%, and 16% of the total sample, respectively); the "Search for Supersaurus" and "Green Velvet Princess" tallies, however, were due to the 4th grade only, whereas solar energy was a favorite topic in both classes. Again there were several 5th graders who expressed negative reactions to the magazine by saying they liked nothing. When asked what they liked least, the dinosaur story was the only one mentioned more than twice--by 7 students, or 16% of the sample, with six of the seven from the 4th grade. In general, few students responded to this item, and eight 5th-grade students said they liked everything.

In ranking the various features of the magazine, only pictures and stories received a majority of "like" responses (67% and 53%, respectively), followed by vocabulary (44%), variety (42%), and games (21%). The low ratings are due in part to the fact that for this item and those following many of the 5th-grade students did not respond, but we do not know if this was due to disinterest, difficulty in understanding the directions for the item, insufficient time, and/or other factors. With the exception of the games, the majority of the 4th graders liked the various features; 14 of them (70%), however, rated the games as "neither liked nor disliked." The fact that the magazine was in Spanish and that some pictures were drawings and some photographs were the two most frequently mentioned differences (49% and 40% overall) when comparing the magazine with their usual school materials, but again, these results are due to the 4th-grade responses. All 4th graders mentioned the magazine being in Spanish and 17 commented on the pictures. The 5th graders gave only six responses, including three vague replies such as "it's different in other things" or "in everything."

The overall percentage describing the students' desire to continue receiving the magazine (63%) is also misleading due to the fact that less than half of the 5th-grade class responded to this item. Nineteen of the 20 4th-grade students said "yes", and one said he/she "did not care", whereas eight 5th graders said "yes", one said "no", and one said "don't care", and the remaining 13 students did not respond to the item. The 4th-grade students expressed a strong preference for receiving the magazine in both English and Spanish (12 vs. 4 for Spanish only and 3 for English only). Only five 5th graders specified any preference; three favored a Spanish edition, two an English edition, and one desired having both English and Spanish editions available. The majority of 4th graders preferred to use it in school rather than at home (15 vs. 8), whereas approximately an equal number of those 5th graders responding desired to use it in each place (5 vs. 4).

Only nine students (21%), eight of them 4th graders, said they would like to see any changes made in the magazine. Seven mentioned specific articles (three each the dinosaur and "Green Velvet Princess" stories and one the "April Foolers" feature) and one gave a vague response; the one 5th-grade student who expressed a desire for change requested "some fun things to do." In addition, all elementary school grade levels were recommended for future use of the magazine by at least someone in both classes. The 4th grade listed the 3rd grade most (95%) and next the 5th grade (75%). The seven 5th graders who responded to this item gave five votes each for the 1st, 2nd, 3rd, and 5th grade, four votes for the 6th grade, and two to three votes for each of the other grades. Only one student, a 5th grader, commented further after completing the questionnaire. That student said, "It's educational and tells of many things such as solar energy."

Both class teachers completed the Teacher Questionnaire. The 4th-grade teacher, however, omitted a number of items, including those describing the students' competencies in Spanish and English. Although in both classes over 86% of the students were Hispanic and were described as speaking Spanish at home, only 41% to 55% of the 5th-grade class were described as being in a bilingual or ESL program. Most of the 5th-grade students were described as speaking, reading, and writing Spanish "pretty well" (80%, 55%, and 50%, respectively), with another 15% and 10% each rated as speaking, reading, and writing it "very well." In contrast to the majority of students in many of the other study sites, these students could also speak, read, and write English at least "pretty well." Forty percent were described as speaking English "very well," and an additional 35% "pretty well"; 50% of them were rated as reading and writing it "pretty well" and an additional 10% "very well."

Both classes used the magazine during Science period, the 4th-grade class for an unspecified amount of time, and the 5th-grade class for 46 to 60 minutes. In the 4th-grade class, the teacher used the "Search for Supersaurus," "Backyard Dinosaurs?," and "Green Velvet Princess" stories, and although he/she translated most of the words, none of the stories were read to the students. The 5th-grade teacher read eight articles he/she thought would interest the students. Neither teacher used the Activity Guide, although the 5th-grade teacher noted he/she had tried to and desired the inclusion of more specific questions about the articles.

These teachers differed considerably in their reaction to the magazine. The 4th-grade teacher perceived the various features as "appropriate" and liked most the variety, interest level, and activities and liked least the fact that some words were difficult. The 5th-grade teacher did not respond to what was liked most or least, but rated the vocabulary and games as "somewhat inappropriate" and difficult and the topics and pictures as "appropriate." Neither one recommended changes when first asked, but the 4th-grade teacher later commented that he/she would like the magazine to be bilingual.

Both teachers described their students as actively engaged while the magazine was being used. The 4th-grade students were described as liking the pictures most ("they kept wandering through the book"). The 5th-grade students reportedly liked the dinosaurs most. Neither group was described as liking anything least. Although the 4th-grade teacher felt the students had learned as indicated by their recall of facts, the 5th-grade teacher responded that he/she did not know.

The 4th-grade teacher perceived the Spanish edition of Ranger Rick as "very different" since it presented information in a relaxed, story-like matter, whereas the 5th-grade teacher perceived it as "somewhat different" by providing enrichment. Although both reported there were no similar Spanish materials in the school (nor an English edition of the magazine), their experiences with the present issue led to very different recommendations. The 4th-grade teacher recommended its continued use in 3rd through 6th grade in Language Arts, Science, and Spanish, whereas the 5th-grade teacher did not recommend its continued use. The 4th-grade teacher perceived the potential value of a Spanish edition for bilingual classes--"Great for science, reading, and quiet reading." He/she also felt the pictures would be useful for ESL students. The 5th-grade teacher, however, felt that the magazine would need to be simplified "because of the limited experiences of the students in the class."

These findings from both the Student and Teacher Questionnaires exemplify the variability in responses that can occur both within and between classes in the same school. The extent to which they result from differences in students' and/or teachers' attitudes, skills, and prior experiences is unknown. The site visit report from this school elaborated on these differences and provided some insight into possible causes

Upon arriving at this school in northeast Los Angeles I first met with the principal; he had expressed much interest in the Spanish Ranger Rick issue and in my visiting the school. We discussed the school population and bilingual program. The school is 85% Hispanic, with 250 of the 900 Hispanic students classified as having limited English proficiency. Although there are five bilingual classes at the Kindergarten level, by sixth grade there is only one. (There are also bilingual Chinese classes.) There is considerable transiency among the school population since this neighborhood is a first "stopping off" place for many arrivals to Los Angeles. The school building is an old one and overcrowded. Unlike many other schools in the Los Angeles area which have decreasing enrollments, the enrollment at this school has increased, and students are on a double shift.

The principal then showed me the locations of the two bilingual classes participating in the study, one a 5th grade on the second floor and the other a 4th grade located in an adjacent bungalow unit. Both teachers had been alerted to my visit. I first visited the 5th-grade classroom. Immediately upon entering the room the teacher, a middle-aged Anglo woman, took me aside to tell me she did not like using the magazine and that it was of little interest to the students in her class. She pointed out that most of the students in this class were at a 3rd-grade reading level and the magazine was more appropriate for other students. Although there is an aide who visits the class to speak Spanish for those who need it, she was not present at this time. The teacher then motioned me to one of the four tables in the room where I could sit with a group of seven students. The students, five girls and two boys, were noncommunicative at first, but slowly became more attentive and interested in my questions. Several boys from another table joined our group, and students at other tables stopped their work to add comments to what was being said. Most of the students reported they liked the magazine and had looked at a number of different parts, but little enthusiasm was expressed. One girl, who reportedly had recently arrived from Puerto Rico, said she liked the magazine very much and had read all of it. Several students found the drawings somewhat "strange" (funny) and one girl was emphatic in her dislike. ("I can't read Spanish.") When asked whether they preferred to have the magazine in Spanish or English, the majority said they preferred it in English. When asked why, one girl said,"because English is more good." Another desired change was the inclusion of pictures of teachers and classes.

I next visited the fourth-grade bilingual class. The teacher was a young, friendly, Hispanic woman. She was very enthusiastic about the magazine and described those parts that had been used so far. She was particularly enthusiastic about the story of the caterpillar turning into a butterfly. The magazines were kept on the classroom shelf because she thought they would be "great" to use throughout the year. She also described how the questionnaires had been administered. She had presented each question in both English and Spanish, making sure the students understood it, but emphasizing they were to answer whatever they wished. The students thought it was a test and said they liked it "because it was easy." The teacher noted that the vocabulary level was a little difficult, but mainly because the students were used to more colloquial Spanish. Also, a few students could not read Spanish. For these students, had translated the ideas and then let them use the magazine as they could. The teacher expressed her belief in the importance of having the students maintain their Spanish skills, and both Spanish and English are used on a regular basis for instruction.

We then joined a table of eight girls to discuss their reactions to the Spanish Ranger Rick issue. The girls appeared shy, with many smiles and giggles. With encouragement from the teacher, they became more verbal. They expressed considerable enjoyment with the magazine, both for its stories and pictures, and were pleased to have it in Spanish. None, however, reported showing it or discussing it with their parents. Following this discussion the teacher elaborated further on reactions to the magazine. She noted that some students express a preference for English because their parents stress the importance of having them learn English. As one parent told her, "Just tell me if she doesn't do her English, and I'll get on her case." Thus this teacher predicted mixed parental reactions to having a Spanish magazine in the classroom. As for herself, she feels such materials are very important and needed. Also, she would like to have the magazine in both English and Spanish so that she could compare words and show students how words are not translated literally.

Upon returning to the school office, the principal brought me to an adjacent room to meet the bilingual coordinator. After thanking her for her assistance in coordinating the distribution and use of the study materials, we discussed her reactions to the magazine. She was very enthusiastic, saying she loved the magazine with its variety of stories and excellent photographs. She thought the vocabulary level was satisfactory, as she felt it important to challenge the students. She preferred, however, that the magazine be in both Spanish and English--in successive sections, not side by side. In commenting on the classes I visited, she noted that the 5th-grade students were at or above grade level in Spanish, but that the teacher probably had difficulty reading the magazine. The "Puerto Rican" girl in that class who was so enthusiastic about the magazine had newly arrived from Cuba; her parents both had scholarships for graduate study at UCLA. The coordinator also noted that the teacher for the 6th-grade bilingual class at the last moment did not use the materials. I explained that the teacher could still participate in the study if she wished, or if not, could distribute the magazines to the students rather than returning them. I then returned to the principal's office to express my appreciation for a very pleasant and informative visit, and he arranged for a cab to take me to my next appointment.

Despite the predominant enthusiastic acceptance of the new Spanish Ranger Rick materials at this school, my visit pointed out the important interaction between instructional materials and teacher behaviors. These materials are not "teacher-proof". The contrasting classroom experiences demonstrated the important influence teacher attitudes and teacher-student interactions have on students' attitudes and behaviors.

Following a 15-minute cab ride from (deleted), I arrived mid-morning at (deleted) Elementary School in the Highland Park area of north Los Angeles to meet with the bilingual coordinator. We discussed the Spanish Ranger Rick magazine in the waiting area of the school office. She was very enthusiastic about this experimental issue. "I loved it, but then I love Ranger Rick anyway." She commented on how good it was to have Spanish materials in a format students were used to and favored. "We usually have newspaper print in only black and white... The English materials have all the neat things--neat pictures, neat stories, and there are no science materials in Spanish."

Since the 4th-grade class had not completed the questionnaire, the coordinator had arranged for me to meet with the combined 5th- and 6th-grade level bilingual class. A student was summoned to the office to bring me to the classroom, which was located on the second floor. Upon arriving there, the teacher, a young Black female, welcomed me and returned to her desk. I then introduced myself to the students and briefly explained the purpose of the study. After showing them a copy of the magazine to refresh their memories, I asked for their comments and reactions. There were approximately 25 students present, most of whom appeared Hispanic, sitting at lined-up desks. When I entered the classroom, they were doing seat work. After a slow beginning, an increasing number of students responded. Their reactions were generally favorable. They were very definite about wanting more issues and expressed the hope they would come soon. In general, they reported having no difficulty with the vocabulary or with reading the magazine. No changes were suggested.

One boy, however, wanted to know more about how they got the bones depicted in the magazine and how they made the various photos. Later the teacher reiterated how much the students had enjoyed the magazine and expressed how much she liked it. "We just don't have anything like it." She noted that she does not know much Spanish, but she has an aide who translated for the students. The aide was not present during my visit. Upon leaving I again expressed my thanks to the bilingual coordinator for the school's assistance.

Since (deleted) Junior High School is only a block from this elementary school, I was able to walk there immediately following my visit to meet with the English department chairman who coordinated the study in this school. During lunch in the staff cafeteria he introduced me to several of the teachers participating in the study and we then discussed the school and plans for my visit. This junior high school is a large two-story building with several wings and with a large outdoor play area. It serves approximately 1,800 students, of whom 60% to 65% are Hispanic. There is an increasing number of Asian students attending the school, many of whom have limited English skills.

I first met with one of Mr. ________'s English classes. There were 19 8th-grade students present, evenly divided by sex. Since this was a regular class, with no previous use of Spanish materials, the teacher had used the period devoted to the Spanish Ranger Rick issue as an opportunity to compare Spanish and English words as a tool to better understanding the English language. He joined me in asking the students about their reactions to the magazine, and we had a very open, relaxed discussion. When the students were asked if they thought it "wierd" to be given Spanish in an English class, they gave a few affirmative nods, but then generally agreed it was fun. During the program class Mr. (deleted) had pointed out how they could sound out the

Spanish, and in so doing understand it, even if they were not used to reading Spanish. When he asked an Asian girl, who he described as just beginning to learn Spanish, what her reactions to the magazine had been, she said she liked it very much and had found it a helpful addition to her Spanish studies. Afterwards Mr. (deleted) again expressed pleasure in using the magazine (although he was concerned that he didn't do it "right") and repeated how much the students had appeared to enjoy it.

I next visited an ESL Math skills class that had recently used the magazine. The teacher was a young Hispanic male. Approximately half the class of 24 students were Asian, and most were males. There was much commotion in the halls as students changed periods, and prior to the start of the class the teacher was overheard giving many sharp reprimands and warnings to his departing and entering classes. After checking attendance, he introduced me and my purpose for being there. It was difficult, however, to get the students to give more than monosyllabic responses. Although the students said they liked the magazine, few specifics were given. When I pointed to various sections of the magazine they showed familiarity and some nonverbal signs of interest, but most of the time they focused on the teacher, possibly seeking clues for responding. The students had difficulty identifying the picture on page two; the teacher thought it was a camel. Later, when I talked to the teacher, he explained he had just handed the magazines out for the students to use as they wished. Although the teacher liked some of the stories, especially the solar energy one, he said he would prefer having the magazine available in both English and Spanish so as to be able to use it with all of his students who, at present, only share their common limited English proficiency.

Unfortunately, there was insufficient time for observing a class, since it was located in a distant auxillary building. Instead, I met with a former ESL teacher during one of her conference periods. This teacher, a young Anglo woman, had used the magazine during the Asian New Year when the Asian students were absent. She had the students read in Spanish and she did also, saying, "Let's see how good I am in Spanish," with the students correcting her pronounciation as needed. She reported having mixed feelings about using the magazine, although she noted that the students enjoyed it. As she explained, "Our push here is to get them to know English so they can compete." Nevertheless, she reported that the stories had stimulated a "wonderful" discussion about the origin of man from both religious and scientific points of view, and that she had been surprised at the students' level of sophistication.

Upon returning to the school office I met the principal, and expressed my appreciation for his and the staff's assistance. Prior to my departure I was introduced to another ESL teacher. Since there were so many Vietnamese students in her class she had used the Spanish Ranger Rick magazine as supplementary material, as a reward for finishing work. She reported that the students had liked it very much. "We push so much English, they rarely get Spanish." As for herself, she thought the magazine was excellent--"good translation, good pictures, good stories."

Thus, as indicated by the questionnaire responses and the site visit interviews, this Spanish edition of Ranger Rick, although generally favorably received, had mixed reception in this site due to differences in teacher and student attitudes and competencies in Spanish and to the difficulties posed by bilingual classes that comprise students of different ethnic groups with only limited English competency in common. For such classes, both an English and

Spanish edition seems necessary. The experience in this site also emphasized the need to recognize that "bilingual" should not be equated with Hispanic. Despite the large number of Mexican Nationals and Mexican Americans in Los Angeles, this metropolitan area serves a continuing large immigration of Asian youth requiring special educational assistance.

San Francisco. Two schools participated in the study from this north California city, one an elementary school serving students through 5th grade and the other a junior high school serving 865 students in grades 6 through 8. The elementary school only sent demographic information on the combined 4th- and 5th-grade bilingual class participating in the study. Seventy-two percent of the 25 students in this class were Hispanic. They were described as generally performing at one or more grade levels below their expected grade level on standardized reading achievement tests. Their families represented a diverse array of socioeconomic backgrounds. Although 40% of the students came from economically disadvantaged families (30% of the household heads were described as unskilled, nonfarm laborers and 10% as unemployed), other parents had skilled labor, clerical/sales, or professional/managerial jobs (30%, 20%, and 10%, respectively). Slightly over a third (35%) of the junior high students were Hispanic, and were described as performing, on the average, one-half to one or more grade levels below their expected grade level on standardized reading achievement tests. Most of the Hispanic students were described as coming from Central America, and although approximately half of them reportedly came from professional families, it was pointed out that schools in their countries of origin have been closed so long that most of these students have had no school for a couple of years. Three bilingual combined classes of 23 to 25 6th-, 7th-, and 8th-grade students from this junior high school participated in the study.

The total number of students who responded to the Student Questionnaire was 96. Twenty-five of them were in the combined 4th- and 5th-grade elementary school class, and 71 were enrolled in the three combined 6th- through 8th-grade junior high classes. Males and females were approximately equally represented in the total sample (49% vs. 48%), but there were a few more males in the younger group (14 vs. 11). Approximately one-fifth of the students (19%) had seen the English edition of Ranger Rick; this was consistent across groups. Their patterns of use, however, varied. The five elementary school students were approximately equally divided between seeing it at home or in school and between 2 to 4 or 5 or more times; all reported liking it. Ten of the thirteen junior high students said they saw it at school, and 61% said they saw it only once and liked it. Moreover, 11 of these 13 students came from one class.

Eighty-eight percent of the sample said they spoke Spanish in their homes, but this varied considerably by group (64% vs. 96% for the younger and older group, respectively). Nine of the 12 students who said they did not were elementary school students. In responding to how well they could read Spanish, 41% of the total sample replied "very well," 39% "pretty well," and 21% "a little bit"; no one reported not being able to read it. As might be expected, a higher percentage of the younger group said they could read it only "a little bit" (36% vs. 15%), but a slightly higher percentage of the younger group (44% vs. 39%) also said they could read it "very well." The results were more predictable when the students responded to the difficulty they experienced with the Spanish in the magazine. Fifty-nine percent said they perceived it as "easy," 25% as "neither difficult nor easy," and 16% as "difficult." Twelve of the 15 students who found the Spanish difficult were in the elementary school (48% vs. 4%). Thus, it is not surprising that the teacher for this combined 4th- and 5th-grade class was described as having read the articles to the students. The teacher for one of the junior high school classes and for 39% to 56% of the other two classes reportedly also did so, resulting in 79% of the total sample who said at least some of the magazine was read to them. Seventy-six percent of the sample also said the teacher translated at least some of the Spanish. All the elementary school students said "most" of the words were translated; almost all the junior high students in one class said only "a few" words were translated, whereas in another class in which all but one student said the teacher translated the Spanish, the extent varied from "a few" words to "all", with 57% saying "all." Perhaps in this class individual help was given to students as they read on their own.

Forty-two percent of the sample reported they did further magazine-related activities in school, but this was primarily due to the 25 elementary school students, all of whom said they had. Only 15 of the junior high students said "yes," and nine of these were from one class. All the elementary school students responded that they had used "all the parts" and had done the "mud and water" experiment. Most of the junior high students (7) mentioned the dinosaur article, but several other stories were mentioned also; the most common activity reported was writing story outlines.

Many fewer students (12%) said they did any further activities outside of school. All 12 students who said they had were in the junior high school, and they were approximately equally divided among the three classes. Responses were highly individualized; no more than two students across classes said they used the same article or did the same thing. These responses included reading more stories, reviewing questions for a test, discussing the magazine with their family, building a dinosaur model, and reading other books about the animals.

Thirty-five percent of the students said they discussed the magazine with their families and/or friends. This ranged from 25% of the elementary school students to 39% to 65% of the students in the three junior high classes. The dinosaur and hedgehogs stories were mentioned most (by 14% and 12%, respectively, of the total sample), but this was primarily due to the fact that they were the only two stories mentioned by the junior high class that had the most students who said they discussed the magazine. The next most frequently mentioned articles ("Search for Supersaurus" and "April Foolers") were listed by only three students each.

When asked what they had learned, various story facts were given by the largest percentage of students (39%); learning about nature and/or animals was the next most common response (28%), followed by science topics and story titles (20% each). As might be expected, a greater percentage of the older than the younger students listed story facts (44% vs. 24%), whereas a greater percentage of the younger students gave the more general response that they had "learned about animals"(44% vs. 23%). In contrast to the general findings in other sites, references to conservation topics were made almost solely by the younger group (48% vs. 1%). The students who gave this response, however, primarily referred only to the topic of solar heating and did not elaborate further. Also, the two most frequent responses by the younger group concerned learning about science topics, such as fossils and diatoms, and Spanish (52% each); only 8% and 1% of the older students, respectively, gave responses in these categories. The only other category of response used by more than 4% of either group was the one for vague or miscellaneous responses. This category was used by 19% of the sample (24% of the younger group and 17% of the older group). Most of the responses were vague ones such as (I learned about) "dinosaurs," "important things," or "a lot"; a few older students said they learned "nothing." Further examination of the class data indicated that in contrast to the usual finding, almost all the 4th- and 5th-grade students listed a variety of topics (e.g., "Spanish words, solar heating, fossils, diatoms, and possum playing dead"), whereas the older students generally gave single and often common responses. For example, most of the specific story facts referred to only one or two facts about the dinosaurs or hedgehogs (such as dinosaurs being cold- or warm-blooded).

Some of the actual responses exemplify better the variety of things students felt they had learned. One elementary student commented: (I learned) "the things that I never heard and other important things and the things my parents showed me that I never saw before and how to write more Spanish and talk more good Spanish." Some junior high students responded: "I learned lots of important things I didn't know. Many secrets of nature. I don't know the number of good things I learned"; "You learn maybe what you don't know and you learn more to read in Spanish if you don't know how to read and how to translate in English"; I learned to read better"; "I learned the ability animals have"; and "I learned some poems, also about hedgehogs and a lot more about nature."

When asked to list what they liked most in the magazine, "Ranger Rick and His Friends," Search for Supersaurus," "Backyard Dinosaurs?", and the magazine's variety were mentioned most often (by 20%, 17%, 16%, and 14% of the total sample, respectively). The rankings within the two grade level groups varied considerably, however. In the combined 4th- and 5th-grade class, 14 of the students (56%) listed "Ranger Rick and His Friends"; the next most frequent article or feature mentioned was the "Sea Poems" and the "Green Velvet Princess" story, but both were listed by only three students. In contrast, "Search for Supersaurus," "Backyard Dinosaurs?," the variety, and the hedgehogs story were the four responses given most often by the older group (21%, 20%, 18%, and 14%, respectively). There also was a greater variety of responses in each of the junior high classes, with stories, pictures, and the activities mentioned by 7% or more of these students.

Many fewer students listed anything they liked least. In fact, 36 of them said they liked everything, including at least half the students in two of the junior high classes. The two articles mentioned most overall were the hedgehogs story and "April Foolers" feature (by 10% and 9%, respectively). In examining the class data, approximately a quarter (24%) of the combined 4th- and 5th-grade class listed the hedgehogs story, whereas only four students (or 11%) in the three junior high classes did. More of the younger students also mentioned the two dinosaur stories. On the other hand, the "April Foolers" feature was listed by only one elementary student, but by eight junior high students (six of whom were in the same class and referred specifically to the dog killing the possum). Further examination of other specific responses revealed that the same article was considered liked and disliked (even by the same individual) because of some specific section or story detail. For example, although many students said they liked the dinosaur article, a few students responded they did not like what was told about birds possibly being dinosaurs long ago. As can be seen, however, the actual number of students using any single specific response category was extremely small; none were mentioned by more than eight students. Also, the category for vague or miscellaneous answers was predominantly comprised of the reply, "I liked everything" (36 of 42 responses). Four of the elementary school students referred not to the magazine but to the questions the teacher put on the board, and one of the older students mentioned the outline he/she had to prepare.

Similarly, the majority of students rated the various magazine features as "liked." The stories received the most "like" ratings (80%), followed by the pictures (75%), games (73%), variety (59%), and vocabulary (58%). Although overall vocabulary, variety, and games received the most "dislike" ratings (7% each), vocabulary and variety received many more neutral "did not like nor dislike" ratings (28% and 24% vs. 11%, respectively). In examining the class data, it was found that preference rankings and the number of "dislike" ratings differed by school and by class. Almost all the 4th and 5th graders liked the games and pictures, followed by the stories and variety; less than half (11 or 44%) liked the vocabulary, and an additional 11 students said they "neither liked nor disliked it." Among the junior high classes, in one class of 25 students at least 19 said they "liked everything." Games, which received the fewest (19) "like" ratings, also received four of the five "dislike" ratings. In the two other classes, both with 23 students, the variety received the lowest number of "like" ratings (with vocabulary next lowest), but the students in the one class gave only two "dislike" ratings (one each for games and pictures), whereas the other class gave 14 "dislike" ratings (four each for vocabulary and variety, and two each for stories, games, and pictures).

The students were asked to describe in what ways, if any, this issue of Ranger Rick differed from their usual school materials. The most frequent responses given overall referred to the number and quality of the pictures (22%), the content on animals and nature (20%), the amount of information presented (16%), the inclusion of games and activities (14%), and the teaching of science (11%). With the exception of the reference to science (which was made by only one student), these also were the differences most noted by the 4th and 5th graders. The inclusion of science topics was mentioned most by the junior high students (but essentially by only one class), with statements that "they enjoyed it more" and "it was better prepared" the second and third most frequent responses. These were followed by the features mentioned previously for the total sample. Moreover, the older students gave a greater variety of responses and pointed out that this issue of Ranger Rick was in Spanish, was more interesting and entertaining, had different stories, greater variety, and was more attractive and easier. Twenty-eight percent of them also gave vague or "other" responses (as contrasted with none for the 4th and 5th graders). Eleven of these 20 responses were "I don't know."

Again, the students' own responses may be more valuable in helping the reader understand these findings. Some of the comments made by students in the different classes were as follows: "It has more pictures, learned more about animals, and it has activities and experiments to do"; "Because it's in Spanish and easier to learn"; "I think it's more important than other books about the same type of things"; "It's different because it's more fun and at the same time you learn easier lots of things"; "It talks of science. It's different, it's a good magazine--well made and very pretty"; "It's the best Spanish magazine. It has better pictures"; "Explains a lot of things of many years ago. Stories are very interesting and very attractive!"; "This is my first magazine in Spanish"; "Puzzles, games, photographs, and articles"; "That it has things I didn't know and with this magazine I learned about Science"; and "I can't tell you because I don't have nature here."

Given the generally favorable responses of the students, it is not surprising that 80% said they wanted to continue reading it. Although a majority of students in every class said "yes," a higher percentage of the elementary school did so than the junior high students (92% vs. 76%). All the students in one junior high class responded "yes," but only 57% and 69% of the other two classes did, and five to seven students in both these classes said "no" or

"I don't care." Forty-seven percent of the students said they preferred to receive the magazine in both Spanish and English. This was consistent across schools, but varied within the junior high school. More students in one of the combined 6th-, 7th- and 8th-grade classes said they preferred to receive it in Spanish only. Overall, a Spanish edition was the second, but much less frequent choice (21%), with an English edition preferred by 15% of the sample. Examination of the class data, however, revealed differences both within and across schools. In the elementary school class, students preferred an English to a Spanish edition (6 vs. 1), as did those in one of the junior high school classes (6 vs. 2). When asked to state where they preferred to use the magazine, 53% of the sample chose school, 44% home, and 7% also indicated other places such as the library or the bus. Again, responses varied within and across schools. More 4th and 5th graders responded home than school (72% vs. 56%); the opposite was true for the junior high students (34% vs. 52%), although one class was evenly split. Also, many of the younger students said they wanted to use it in both places. Some students explained their choices by noting, for example, "In school because you learn what you don't know"; "At home because I could show it to my parents."

Only 11 students (11% of the total sample) said they would like to see any changes in future issues. Nine of the eleven were junior high students. A variety of suggestions were offered, with none mentioned by more than three students. Included were requests for adding pictures or deleting ugly ones, changing the Spanish to English, and including more pictures and more stories on animals. One student suggested that there be Spanish on one side and English on the other for those who did not know Spanish.

In addition to wanting to continue receiving the magazine themselves, at least six students recommended it be used at every grade level from kindergarten through 8th grade. The 5th, 6th, 7th, and 8th grades were recommended by the most students (56%, 52%, 42%, and 41%, respectively). Students in the combined 4th- and 5th-grade class chose their grade level most, whereas more students in all three combined 6th- through 8th-grade classes recommended that the magazine be used in 6th grade (perhaps partly due to their reported ease reading it).

Many of the students made additional comments after completing the questionnaire. Most of them reiterated what they had previously said--what they had done, learned, enjoyed, and/or would like to have changed. The following examples from different classes provide some additional insight into the students' reactions: "It's a pretty magazine, it is not bad, and you could understand everything because it is in Spanish"; "The magazine was great and I think kids from 2nd, 3rd, and 4th grades should read the magazine too"; "We (4th graders) had comprehension and we talked about it. It was good because we learned Spanish even though we did not understand it"; "The stories were good and I used it everyday"; "First of all I would like it in English. One month in English and another in Spanish and they also should have animals or pictures of animals from the zoo"; "I used it to learn. My family read it too. I tried to make the carton dinosaur, but I didn't do it well"; "It's good teaching. Has a little of everything. It's instructive. I liked everything and I wish all California and all around the world would have the opportunity to use it"; "It's very fabulous, especially the diatoms and investigation of dinosaurs and I like it all very much, especially the science and I would like a little science fiction"; "Well, I think it's interesting because it explains some of the past well in interesting words"; "I liked it very much. It's beautiful"; "I think this is a very interesting magazine. I learned a lot about nature and I had a chance to get a better vocabulary. I also learned plenty from the scientific descriptions as appeared on page 5 about dinosaurs and other things"; "I think this magazine is good because I learned many things. I used it to learn zoology, archeology, and to read better in Spanish"; and "I like this magazine Ranger Rick because it is very interesting such as the story about Supersaurus. It's very nice, but to believe what you wrote I need more evidence. My name is (deleted) and if you have any proof to make me believe your story, I will wait for your answer. My address is (deleted)."

School Questionnaires were completed by teachers in both schools. One of the teachers had participated in the study, the other was also a curriculum coordinator and counselor. Although the English edition of Ranger Rick was reportedly not available in either school, the one teacher had read it numerous times at home and liked it a lot. Both were enthusiastic about the present Spanish edition. The one teacher said he/she liked all the various features very much; the other also liked the variety, pictures, and interest level of the stories very much, and liked the vocabulary and games only a little less. When asked what they liked most, one indicated the story topics because they were of high interest to the students and the other especially liked the Teacher Guide because it was helpful. What they liked least was that "the vocabulary was a little too difficult" and "there were no questions at ends of stories." Consequently, the one teacher recommended that in future issues the Spanish vocabulary be easier (and later commented that there be two editions), and the other teacher recommended that questions or activities be added at the end of each story. One of the teachers also had discussed the magazine with students and reported that they, too, had enjoyed it.

Although there reportedly were no similar Spanish materials in the elementary school, the junior high school respondent referred to El Sol. In comparing

Ranger Rick with El Sol, he/she replied that this issue of Ranger Rick was very appealing, provided more information in a more attractive way, but added that maybe it was too expensive in these days of cutbacks.

It is not surprising, given their enthusiastic response to the magazine, that both staff members recommended its continued use in their schools. The elementary school teacher recommended it for grades 4 and 5 in Language Arts, Science, and Spanish; the junior high school teacher recommended it for grades 6 through 8 in Spanish and Social Studies. Both respondents endorsed the magazine's educational value ("much value--high interest"; "adds information and knowledge in other than a textbook context"). They also concurred that it was potentially useful for bilingual programs: "Excellent--topics appeal to most children whether immigrants or long time in the United States"; "It can be used in a variety of ways in a social studies or science Bilingual class. Can be very motivating." The one teacher also commented on its potential usefulness for ESL programs: "Can be used, but only the English version." After completing the questionnaire, the following comment summed up well both respondents' reactions--"Very impressive format with a wide range of uses."

Teacher Questionnaires were completed for three of the four participating classes. The accompanying Class Transmittal forms suggested, however, that one teacher was responsible for two of the junior high school groups.

At least 86% of the students in the one participating elementary school class were enrolled in a bilingual program; 72% were described as Hispanic, and 56% to 70% as speaking Spanish in their homes. Their teacher rated 65% of them as speaking Spanish "very well" (15%) or "pretty well" (50%), reading and writing it "pretty well" or "somewhat" (35% and 30%, and 30% and 35%, respectively); 25% of them, however, could speak, read, and write Spanish "hardly at all." They were described as considerably more proficient in English. Eighty percent were rated as speaking it "very well" (20%) or "pretty well" (60%) and 65% as reading and writing it "very well" (10%) or "pretty well" (50%); only 8% were described as unable to speak English and 10% as unable to read and write it.

Students in the combined 4th- and 5th-grade class used 11 of the articles during the more than 90 minutes spent on the magazine in their Spanish class. The teacher read five of the articles thought to be of most interest to the students and translated about half of the words; the Activity Guide was not used. This teacher enjoyed the magazine, especially the high interest topics, but found the vocabulary level too difficult and recommended an easier Spanish edition also be produced. In evaluating the various magazine features, the story topics and pictures were rated as "very appropriate," the games as "appropriate," but again it was noted that the vocabulary was "somewhat inappropriate."

The students reportedly were actively engaged during the magazine's use. The teacher said they appeared most interested in animals with some mysterious element such as the dinosaurs, "Ranger Rick's Rare Wonders," and the diatoms, as well as the fairy-tale quality of the "Green Velvet Princess" story. If there was anything the students liked least, it may have been the solar heating section. ("At first they appeared intimidated by complicated looking schematics of pipes, etc., but understood it later.") The teacher also perceived the students as having learned from their brief exposure to the magazine as evidenced by the fact that most of the students could answer written and oral questions about articles.

According to the teacher, no similar Spanish materials are available in this school, nor is there an English edition of Ranger Rick. The teacher, however, was familiar with the magazine and had read it at home more than five times and liked it a lot. The present Spanish issue of Ranger Rick was rated as "somewhat different" from the students' usual school materials because there was much more focus on animals and nature than most textbooks. This teacher felt that the magazine had considerable educational value and "excellent potential for bilingual programs--topics of high interest to almost all the students." Thus, he/she recommended a Spanish edition of Ranger Rick for future use in grades 4 and 5 for Language Arts, Science, and Spanish.

At least 86% of the students in the junior high school classes were described as Hispanic, as speaking Spanish in their homes, and as enrolled in the bilingual program. As noted earlier, only two questionnaires were completed for the three classes, but the Class Transmittal form indicated that data for the 8th-grade students were included with those for the 7th-grade students. Both Teacher Questionnaires referred to groups of 6th-, 7th-, and 8th-grade students. The teachers described the students as speaking Spanish "very well," reading it "pretty well," and writing it "somewhat." The one class was described as generally speaking, reading, and writing English "pretty well," although the teacher commented that it was a "mixed group"; the other class was rated as performing these skills only "somewhat."

Both classes used the magazine in a bilingual class during Social Studies. The class transmittal form indicated the third class did so also. The one class spent more than 90 minutes on three articles. The teacher commented, "We aren't finished. I chose the articles that had some length to them. The puzzles and jokes I felt they could do on their own." None of the articles were read to the students, nor was any of the Spanish translated. Students in the other class spent 30 to 45 minutes on six articles selected in response to student requests and because they seemed related. Although this teacher also did not read any of the articles, he/she reportedly did translate a few words. One teacher used the questions in the Activity Guide to extend discussions and found it helpful, but suggested that some tests on long articles and some bilingual vocabulary guides be added; the other teacher did not use the Guide.

Both teachers enjoyed the magazine. When asked what they liked most, they replied, "The illustrations and the easy to understand texts. It's a beautiful looking magazine"; and "The scientific subjects, the photographs." In commenting on what they liked least, they said, "Technical words and words for animals should have English translations even in a Spanish edition since most of them do not easily translate and a few do not exist in our dictionaries"; and "Some suggested activities are hard to carry out." Only one teacher suggested any changes for future issues--"A few mistakes, like in the division of syllables, perturbed me. But compared to other materials available, it's excellent." In rating the various magazine features, both teachers described the pictures as "very appropriate," and the vocabulary as "appropriate"; the story topics were rated as "very appropriate" by one and as "appropriate" by the other, but the games and activities were described as "very appropriate" by one teacher and as "somewhat inappropriate" by the other since they were perceived as not always suitable for class activity.

Both teachers reported that their students were actively engaged when the magazine was used. The one class was viewed as liking best the photographs, whereas students in the other class were described as interested most in the stories, photographs, and games. Neither mentioned anything their students liked least. ("The students seemed to like all of it.") The one teacher also noted that the students were engaged in various follow-up activities--homework, reading and answering questions, learning vocabulary--and that both he/she and the students were engaged in further pleasure reading. Both teachers also perceived their students as having learned from the experience as evidenced by their recall of facts and further inquiry and by the new information and outlining techniques they had acquired.

They reported that there were no similar Spanish materials in the school. The English edition of Ranger Rick was also unavailable and neither teacher had seen it before. In comparing the present Spanish edition of Ranger Rick to their students' usual school materials, one teacher viewed it as "very slightly different" because "the students have had little prior exposure to this sort of thing," and the other rated it as "very different," but did not elaborate further. Given their very favorable reactions to the magazine and the lack of comparable materials, they both recommended that it continue to be used in their school in grades 6 through 8; one suggested it be used in Language Arts, Science, and Spanish and the other in Language Arts and Social Studies. They enthusiastically endorsed its educational value: "Gives the bilingual students a fine resource for a Science component of Social Studies"; and "It's highly valuable. It's amazing how many things we found to discuss and explain." Also, they both felt it would be highly valuable for the bilingual program. As the one teacher commented, "Excellent range of materials, beautifully presented. I hope we do get it next year."

In summary, for this relatively small but diverse sample of northern California urban elementary and junior high Hispanic students of Mexican and Central American origin, this Spanish edition of Ranger Rick's Nature Magazine in general proved to be an enjoyable and instructive experience. The bilingual teaching staff enthusiastically received the issue as a welcome and needed addition to the science materials currently available for these students; for the 4th- and 5th-grade pupils, however, an edition with simpler vocabulary was recommended.

San Gabriel. San Gabriel was one of two suburban California sites in the study. The other, Chula Vista, which was described earlier, serves students near the southwestern border of the state, whereas San Gabriel is a northeastern suburb of Los Angeles. Two San Gabriel schools participated in the study, one an elementary school serving kindergarten through 6th-grade students and the other an intermediate school serving 700 7th and 8th graders, 40% of whom were Hispanic. Although no further demographic data were provided for the elementary school, students in the intermediate school were described as performing on the average a half to one grade level higher than their expected grade level on standardized reading achievement tests. No family information was available from either school, but San Gabriel is generally described as a somewhat affluent area.

Each school provided one class: a combined 4th- through 6th-grade group comprising students enrolled in a bilingual, ESL, or transitional program, and a Spanish for Spanish Speakers class for 7th and 8th graders. The total sample comprised 40 students, 19 from the combined 4th- through 6th-grade group, and 21 from the combined 7th- and 8th-grade class. According to their teachers, there were more girls in each class. (The overall percentages from the Student Questionnaires (48% female vs. 30% male) were inexact given the fact that almost a third of the combined 7th- and 8th-grade class did not identify their sex.) Only a fifth of them (8) had seen the English version of Ranger Rick before either at home or school. Most reported having seen it two to four times and all but one student reported liking it. Ninety percent stated that they spoke

Spanish at home, but only 20% said they could read it "very well"; 42% rated themselves as reading it "pretty well," 28% "a little bit," and 8% "not at all." Almost half of them (45%), however, said that the Spanish in the magazine was "easy." Thirty-two percent stated it was "neither difficult nor easy" and 22% said it was "difficult." These patterns were consistent across schools.

Although the younger class reported that the teacher had read the magazine to them, the combined 7th- and 8th-grade class all said "no." Similarly, the teacher reportedly translated the Spanish for the younger class, but only for a third of the older group; in both classes most students said only "a few" words were translated. Only three students said they did further magazine-related activities in school, but only one provided information on what was done (answering questions). A few more (9 in all) reported doing further activities outside school, with the two 8th graders indicating that they had studied more about the hedgehogs; only four of the seven younger students provided specific information (three mentioned using the "Ranger Rick and His Friends" story and one the dinosaur article, and two said they discussed it with their mothers). Slightly over half of the students (52%) said they discussed the magazine with their families and/or friends, but 16 of the 21 were from the younger group. A variety of articles was mentioned, with the "Backyard Dinosaurs?" article most frequently indicated (by a third of the group), followed by "Ranger Rick and His Friends" (by 24% of the group).

Most of the students reported learning something from the magazine, but the older students primarily described specific story facts, whereas few of the younger students did so; with the exception of three younger students who reported learning new Spanish words, their responses were either vague or referred to learning in general about animals. In addition to providing many specific story facts, the older students also commented on learning the poems, and about conservation and caring for animals. Two responded that they learned "Nature is very beautiful" and that "One can do many things in life."

When asked what they liked most, "Ranger Rick and His Friends" and the dinosaur articles were mentioned most overall, but the "Ranger Rick and His Friends" story and the two dinosaur articles were listed most by the younger class and the "Backyard Dinosaurs?" and "Happy Bee" articles by the older students. With the exception of the "Ranger Rick and His Friends" story, no feature received more than four votes, although several of the elementary school students said they "liked everything." Many fewer responses were given by both groups when they were asked what they liked least, with no feature mentioned more than twice within a class. For the combined sample, "April Foolers," "hedgehogs," and "dinosaurs" were mentioned most (three times each). In rating the various magazine features, the students said they liked most the stories (80%), next the pictures (72%), then the variety and games (65% each), and least the vocabulary (46%). Similar rankings occurred across grade levels, but fewer "likes" were expressed by the older class.

In comparing this magazine with their other school materials, the most common difference noted was the pictures (by 15% of the total sample). Both classes stated that it was a good and enjoyable magazine, but otherwise the two groups focused on different aspects; the younger class commented more on concrete features such as the use of Spanish, its size, and the presence of animals and games, whereas the older students referred to the different types of stories included and to it being more interesting and informative. Only four students (all from the combined 7th- and 8th-grade class) mentioned desired changes: the poems, confining the issue to nature articles only, using English, and making it easier.

Consistent with their generally favorable but differential class reactions to the magazine, 80% said they wanted to continue receiving it; only one of the younger group and four of the older students said they did not. There was a predominant preference (42%) for receiving the magazine in both Spanish and English (although this was true of 52% of the older class and only 32% of the younger group), with an equal number (8 overall) preferring it in Spanish only or English only. The younger students preferred using it at home, whereas the older students evidenced a slight preference for using it in school (10 vs. 6 and 9 vs. 8, respectively). At least one student recommended that the magazine be used at each of the grade levels from kindergarten through 8th grade, but overall the 5th grade was preferred most (70%), followed by the 4th, 6th, and 7th grades (50% each), with each of the classes choosing its own grade level most.

Almost all of the students wrote additional comments at the end of the questionnaire. Several elementary students just said that they liked the magazine very much, but others added that it was interesting, fun, had good stories and photos, was pretty and colorful, and easy to read because of its letter type and stories. One younger student said, "I liked it very much. It's good and good for Spanish kids to learn more about reading." Among the many favorable comments made by the older students were: "My mother and I feel it's a good magazine"; "It informs us on animals unknown to us"; "I have found new words"; and "I think it's fun to read such a good magazine."

School Questionnaires were completed for both schools--by the resource program teacher in the elementary school and by the principal in the intermediate school. Although the English version of Ranger Rick was in neither school, both individuals had read it; the one person did not specify further, but the other said he/she had read it more than five times at home and liked it a lot. Both were generally very favorable in their response to this issue. The elementary school resource teacher liked very much the interest level and pictures and liked the other features too. The intermediate school principal liked the pictures and stories very much, but thought the games not applicable and "neither liked nor disliked" the vocabulary. Both liked most the pictures, but differed in what they liked least. The elementary school staff member expressed the need for more puzzles and games, whereas the intermediate school principal referred to the vocabulary used. Also, the former listed no desired changes, but the latter requested an easier vocabulary and sentence structure.

The resource teacher had discussed the magazine with the students and reported that they, too, liked it very much. "The children were very excited about how the materials were presented and the fact that they were able to read and share the contents with their families." In contrast, the intermediate school principal had not discussed the experience with the students but commented that it was "too difficult for lower levels. Most Mexican students have trouble with advanced Spanish structure and vocabulary." It is not surprising, therefore, that these two administrative personnel arrived at different recommendations. For the intermediate school it was recommended that the magazine not be used on a regular basis, but perhaps instead be used late in the program year since there was no bilingual or ESL program per se, but only a Spanish program in the school. For the elementary school it was enthusiastically recommended for 4th through 6th grade in Science and Spanish and was viewed as an excellent addition to the bilingual program. As a final comment this teacher noted, "I'd like to thank the appropriate person who allowed our children to experience this magazine."

Teacher Questionnaires also were completed for each school--by the bilingual teacher for grades 4 through 6 and by the Language Department Coordinator in the intermediate school. Although both staff members described their students as over 86% Hispanic and speaking Spanish at home, their skills in both Spanish and English varied. The younger students were described as speaking Spanish "very well," reading it "pretty well," and writing it "somewhat"; in general they were rated as performing these skills in English "pretty well." In contrast, although the older students also were rated as speaking Spanish "very well," they were described as being only "somewhat" able to read and write it; their English competencies were even poorer--generally speaking it "hardly at all" and reading and writing it only "somewhat." Both classes had 25% to 40% of the students enrolled in a bilingual or ESL program.

These differences in student characteristics undoubtedly accounted in part for the differences in the nature and extent of the magazine's use in the two schools and in the teachers' final recommendations. In the elementary school it was used for 30 to 45 minutes during after-school activities, with the teacher reading the "Search for Supersaurus" article selected by the students and translating a few of the words as needed. The older students spent 46 to 60 minutes during their Spanish class "reading" the entire magazine on their own; no translation was provided.

When these teachers were asked what they liked most, the elementary school teacher responded, "the whole issue"; the intermediate school teacher said, "the interesting topics." The former replied "nothing" to what was liked least; the latter said, "the technical vocabulary." Both, however, viewed the pictures as "very appropriate" and the vocabulary as "somewhat inappropriate." The story topics and games also were rated as "very appropriate" by the elementary school teacher and only somewhat less so ("appropriate") by the intermediate school teacher. Neither teacher had used the Activity Guide nor suggested changes for it or the magazine.

Both teachers described their students as actively engaged when the magazine was used. The younger students were described as loving the coloring used, the presentation of various themes, and the activities, and as disliking nothing; the intermediate school teacher provided no information on what the older students had liked most or least. Also, the younger students were perceived as having learned during the pilot exercise as evidenced by their class participation and recall of facts, whereas the intermediate school teacher did not know if the students had learned anything.

The English version of Ranger Rick reportedly was not available in either school, and neither teacher had seen it before. Both also reported there were no similar Spanish materials in the school and the present magazine was different from the school materials currently being used by their students. The intermediate school teacher particularly noted that the magazine was "very different" because "nature science and live science are not usually taught." Nevertheless, the very different experiences these teachers had with this Spanish edition led them to very different recommendations. The elementary school bilingual teacher recommended it for use in 4th through 6th grade in Language Arts, Science, and Spanish, whereas the intermediate school Spanish teacher did not recommend its continued use as he/she "didn't think it can be used until late in the year." Their comments provide further insight into their conclusions. The elementary school teacher, while noting it was "a little too sophisticated for the students in this school," thought it was an "excellent magazine for extra activities and easily coordinated into the bilingual reading program." He/she later commented, "I found your magazine to be very informative, all topics nicely presented, and it kept the interest of students pretty high." The intermediate school teacher, however, commented, "They had difficulty reading the technical vocabulary and unusual sentence structure. My students are predominantly Mexican. Much of the magazine is Castilian."

Thus, even in a small area serving youths of similar Hispanic origin, the variations in staff attitudes and experiences and student competencies produced very different results for the acceptability and use of the present Spanish edition of Ranger Rick. These data also point out that one cannot assume students' Spanish skills by age or grade level nor by their proficiency in one mode of communication.

Examination of the findings from the seven study sites in California indicated that for this diverse sample of predominantly Mexican American urban, suburban, small town, and rural 4th- through 8th-grade students with a wide range of Spanish and English language skills, the pilot use of a Spanish edition of Ranger Rick was generally perceived by both students and staff as an appropriate, useful, and enjoyable learning experience. For those older students with limited English proficiency the need for appropriate Spanish science materials seemed especially critical. The variability within sites (and often within schools), due in part to differences in students' characteristics and teachers' attitudes and skills and the particular sociocultural context in a given site, precluded evidence of significant differences between urban/suburban and small town/rural sites. Also, for the present sample the increasing immigration of Asian children and youth with limited English skills appeared to pose a special problem in the Los Angeles community for identifying appropriate instructional materials in bilingual or limited English proficiency classes.

Florida

Miami. Following review and approval of the study by the Miami Dade County School Board, local staff identified schools of diverse characteristics serving Cuban youth. Four elementary schools in the Miami Dade County area participated in the study. The schools varied in grade composition, size of student enrollment, and percentage of Hispanic students, and in the socioeconomic background and academic achievement level of their students. The students participating in the study were enrolled in various programs (bilingual, ESL, transitional, Spanish for Spanish-speaking students) and varied in both their Spanish and English language competencies.

The four schools were located in different areas of the county--in south Miami, Miami Beach, and Hialeah. The two Miami city schools each served approximately 900 pre-kindergarten or kindergarten through 6th-grade students. The one school, however, was only 36% Hispanic (most of whom were Cuban with some students from South America). Students in this school, on the average, performed one-half to one grade level below national norms on standardized reading achievement tests and many came from very low socioeconomic status families (46% of household heads were in unskilled jobs or unemployed--40% in unskilled, nonfarm labor, 1% in farm labor, and 5% unemployed). The remainder came primarily from families in skilled labor (30%) and clerical/sales (23%) positions. In contrast, 81% of the students in the other Miami city school were Hispanic (almost all Cuban), performed on the average at grade level, and came from families predominantly (50%) in professional or managerial positions. The remainder had clerical (25%) or skilled labor (20%) jobs, and 5% were unemployed. The Miami Beach school was a large middle school serving 1200

4th, 5th, and 6th graders, 75% of whom were Hispanic. In general, these students performed a half to one grade level below their expected grade level on standardized reading achievement tests, and 60% came from families who were in unskilled, farm labor or were unemployed (30% each). The fourth school, in a middle-income urban area, served 980 kindergarten through 6th-grade students, 75% of whom were Hispanic. Most of the Hispanic students were Cuban, but approximately 25% were of Puerto Rican origin. The students in this school generally performed at grade level on standardized reading achievement tests and all came from upper-lower or middle-class families (40% were in skilled labor, 50% in clerical/sales, and 10% in professional/managerial positions).

The number of classes and types of programs represented in the study sample also differed across schools. The one Miami city school provided a 4th-, 5th-, and a 6th-grade Spanish for Spanish-speakers' class with class sizes of 17, 48, and 41, respectively. The other Miami city school provided seven classes: a 4th-, 5th-, and a 6th-grade Spanish class; a 4th-, 5th-, and a 6th-grade Spanish for Spanish-speakers' class; and one combined 5th- and 6th-grade ESL Science class--with class sizes ranging from 22 to 41. The other two schools each provided two classes--one a combined 4th- and 5th-grade and a 6th-grade class and the other a 4th- and a 5th-grade class. The former served students in a Bilingual Curriculum Center program, whereas in the latter school, students were enrolled in an ESL program. Class sizes in the former school were 29 and 45 and in the latter, 27 and 19, respectively.

The total number of students responding to the Student Questionnaire was 435, with slightly more males than females (49% vs. 47%) among the 418 who identified their sex. Classes within schools, however, varied in the extent to which one sex predominated. Of these 435 students, only 75 (or 17%) reported having seen the English edition of Ranger Rick, with most of them having seen it only once, equally often at home or school, and 61 of them said they had liked it. All 75 came from the two Miami city schools. Ninety-four percent of the students reported they spoke Spanish in their homes, and most said they could read it "pretty well" (56%) or "very well" (25%); none said they could not read it at all. Similarly, 57% responded that the Spanish in the magazine was "easy," and 37% said it was "neither difficult nor easy"; 21 students (or 5%) found it difficult. These results were generally consistent across classes. Students in those classes reported to be highly proficient in Spanish as described later in the Teacher Questionnaire findings, such as those in the Bilingual Curriculum Center program, reported the greatest ease in reading Spanish. In all classes the teacher reportedly read at least some of the articles to the students (the 10% who said "no" may have been absent at the time, since many teachers, as later will be described, used the magazine for several days and read only some of the articles). Slightly over half of the students (51%) said their teacher translated at least some of the Spanish, but 81% of them reported this was done for only a few words. Almost all of these students came from the one large Miami school.

Thirty-seven percent of the students reported doing further magazine-related activities in school. With the exception of a few students in other classes, this percentage represented five of the 14 study classes--the Miami Beach and Hialeah classes and the one ESL class in Miami. The dinosaur and "Who Knows?" articles were mentioned most frequently (by 23% and 12% of the total sample, respectively), but two classes referred solely to the dinosaur article, one class solely to the "Who Knows?" feature, and one class mentioned only the poems; the fifth class equally mentioned the dinosaur, "Who Knows?", hedgehogs, and "Green Velvet Princess" articles. Similarly, the activities differed across classes, with overall percentages ranging from 8% to 12% for building the Boxosaurus, doing library research, drawing, writing compositions, and answering questions. One class drew pictures and wrote reports on dinosaurs; another answered questions about what they read; a third class reported writing poems; and students in the remaining two classes described several activities--building the dinosaur model, drawing story illustrations, doing further reading and library research, and answering questions during later class discussions.

A slightly smaller percentage of the overall sample (34%) reported doing further magazine-related activities outside school. This percentage included three of the five classes described previously, plus approximately two-fifths of another; the remaining students comprised a few individual students and a third to a half of four other classes. Again, the dinosaur article was most frequently mentioned (by 18% of the total sample), but articles and activities reported varied across classes. One class mentioned only the dinosaur article and students said they investigated the subject further, including asking questions in the community. Another class in the same school referred only to the "Muddy Magic" activity described in the "Nature Club News" feature and to doing experiments. In a different school the dinosaur article led to building or drawing a dinosaur, learning about fossils, and answering questionnaires. In the remaining classes, various articles were listed and the primary activity described was reading or rereading stories, with a few students building the carton dinosaur or doing the puzzles.

Almost half of the sample (47%) reported discussing the magazine with families and/or friends, and the most popular topic was the dinosaur article (42% of those responding, or 20% of the total sample). Again, classes varied in the extent to which students did so, and there was no apparent pattern by school or grade level. Also, in some classes there was one predominant response (e.g., 27 of the 29 6th-grade ESL students listed the dinosaur article), whereas in most classes various articles were mentioned by a few students. Most of the "other" responses were descriptions of talking to their parents or friends or statements that they had discussed the entire magazine.

In describing what they had learned, the two most frequent responses given referred to learning about nature or animals, or specified story topics or titles (24% each). Twenty-two percent recorded specific story facts and 20% referred to science topics such as learning about fossils and solar energy. Differences between schools as well as between classes were evidenced for this item. In one Miami school almost all the students in each of the three classes listed specific story facts. In one of these classes, however, the responses tended to be simple and highly repetitive, whereas in the other classes varied and multiple facts were given by students. This difference may be due in part to the fact that the former class comprised the youngest (4th-grade) students. In this same school, eight of the ten "conservation" responses were given by the 6th-grade class. In another school, students in one class all listed several different animal names, whereas in another class they were more likely to report general topics. Other students with apparently greater writing skills gave varied and more lengthy descriptions of what they had learned about animal life, nature, and scientific methods. With the exception of one 4th-grade class, references to diatoms and/or to solar energy were generally made by the older students. Of course, since what was learned was largely dependent upon what was presented in class, the teacher is likely to have chosen the more technical articles for the older students. A quarter of the sample gave vague or miscellaneous responses. Although most of these included vague references to animals, several students commented on learning to pronounce words better, on improving their reading and writing skills, and on learning many interesting things they had not known. Students in the 6th-grade ESL class, which tended to give a common response, all said they had "learned about the importance of the magazine's content and about dinosaurs."

When asked what they liked most in the magazine, it is not surprising, given the earlier reported findings, that the dinosaur story was mentioned by the most students (29%), closely followed by the pictures (24%), and then by the article on hedgehogs and the "Ranger Rick and His Friends" story (15% and 11%, respectively). Six percent said they "liked everything." With the exception of the last few brief features, every article and general category was mentioned by at least one person. Again, some classes concentrated on one or two features, such as the photographs and/or the dinosaur or hedgehog story, whereas others gave a diverse set of responses. In some cases this variety of responses was due to diverse individual preferences; in other cases, each student reported several different articles or features. In contrast, no article or feature was mentioned as liked least by more than 5% of the sample (for the dinosaur and hedgehog stories). The most common category of response was "other" (38%), which was largely due to students saying that they liked everything. Half of the classes listed four or fewer articles or features they liked least. It should also be noted that articles that some students liked best others liked least. Also, in some cases, the same article was mentioned as liked most and least by the same student because of different aspects. This was especially true when an article included several different sections, as did the "Who Knows?" feature. For one class, this was both the most liked and most disliked part of the magazine. The enthusiasm for the magazine was particularly evidenced in the ratings given various features of the magazine. The percentage of students who said they liked a particular feature ranged from 77% to 89%, with the photographs liked most, closely followed by the stories (85%), variety and games (78% each), and vocabulary (77%). There were only 35 "dislike" ratings and the vocabulary used received the most of them (12).

In differentiating this edition of Ranger Rick from their other school materials, the students most often indicated the photographs (33%) and that the content was more interesting (30%). Other frequently mentioned differences were its use of Spanish (16%), attractiveness (14%), stories (11%), ease of understanding (11%), articles on animals and nature (10%), and the provision of considerable new information (9%). Responses in the "other" category often focused on physical features such as the fact that it was a magazine and had good quality paper and print. Some classes emphasized the attractive colorful photos; others emphasized the interesting stories and varied topics and activities. In the school serving the most economically disadvantaged Hispanic students, most youngsters noted how much better it was to have the magazine written in Spanish ("It's in Spanish and it's better like that to understand"; and "It's written in Spanish and has good topics and activities"). Although in more advantaged family circumstances and more facile in English, students in another area of the county expressed similar thoughts and feelings. "It tells many interesting things and explains things easier." "I learned a lot in less than an hour." "It's different because it tells you everything with prints and easy vocabulary." "I learned a lot of things from such a tiny magazine." From another school in another part of the county, several students said, "It has variety and also teaches and is more interesting." One class in an apparent consensus stated what was repeatedly expressed elsewhere, "This magazine is simple and easy to read. It has many pretty pictures and interesting stories. They are short with lively themes."

Given the enthusiastic response to the magazine, it is not surprising that almost everyone (94%) wanted to continue receiving it, with only eight students saying they did not and five indicating they did not care either way. The eight students who said "no" were distributed among four classes, with four of the five "don't care" responses coming from the same classes. Overall, the majority of students (52%) expressed a preference for receiving the magazine in both Spanish and English, with 28% preferring it in Spanish only, and 17% in English. Preferences varied within schools. For example, in one of the schools with only two classes, 19 of the 27 students in one class preferred to receive the magazine in Spanish, whereas 17 of the 19 students in the other class preferred to receive it in both Spanish and English. Only two classes expressed a preference for a single Spanish edition and only one class for an English edition, but several did indicate approximately equal preferences for either Spanish or dual versions. Also, an approximately equal number of students reported they wanted to use the magazine at home or at school ([illegible]1% vs. 52%, respectively). Many students said they wanted to use it in both places, with a few (3%) noting other places such as the park, library, beach, and so forth. Again, classes within schools differed in the extent to which they preferred one location over another. Only in one school, with 60% of the student body from families in unskilled jobs or unemployed, did the students express a consistent strong preference for using the magazine in school, although most of them preferred to receive it in Spanish. Several students in this school explained their choice by saying that the teacher could help them. Such statements may not only reflect a supportive school, but indicate the importance of such assistance for students whose parents have had very limited schooling. For those students preferring to use it at home, one student's explanation may serve for many--"because I want to read more with more time."

Consistent with their very favorable reaction to the magazine, few students (37 or only 9% of the total sample) expressed a desire for any changes. At least a quarter of the desired changes were positive--bigger, more stories, more pictures, more activities, and more animals represented. Half (18), however, mentioned specific articles or pictures (the hedgehogs or hippopotamus) they would like changed, two said they wanted the words easier, and one wanted the magazine in English. It is of interest to note that 17 of the 37 responses were given by one class, with the article on hedgehogs mentioned most often. In addition to wanting to continue receiving the magazine with few, if any, changes, at least 20 students recommended its future use in every grade from kindergarten through 8th. The grade levels represented in the sample were selected most, however, with the 5th grade listed by the largest percentage of students (76%), followed by the 6th grade and 4th grade (71% and 70%, respectively). With the exception of one class which showed a slight preference for the next grade level lower, each class recommended its own grade level most.

The majority of students wrote additional comments after completing the questionnaire. Their statements were usually reiterations of what had been previously stated--how much they had liked the magazine, enjoyed the pictures, found the stories interesting, and learned many new things. Some described again what they had done in and/or out of class and articles and activities they especially liked. Others repeated those features they wished changed. Many expressed the hope that they would continue to receive the magazine, and one class noted that they expected to continue using it once a week as a regular part of the curriculum. The following quotes from the different schools exemplify the feelings of many. "I used very well this magazine. I liked much its stories and activities and also I liked how it described the stories. I would like for them to continue making it because it delights me!" "Liked it very much. My mother read it and liked it also." "I read other books and compared them to this one. I liked this one best." "I think this magazine was great and also I like the idea of reading it in Spanish." "I learned things I didn't know and I liked it very much." "My father liked it and said it was good for me." "It's marvelous and the photos fantastic." "I think this book is good to read because it shows you how to read better and it shows you things you don't know." "It is good to learn about animals. The drawings, the stories and the reading are nice and I think anybody would agree with me if they read it." "Liked the stories, questions, and poems. Good to learn to read." "I feel very happy to have the chance to read this magazine. It is very interesting." "I like this magazine so much that I would like to buy an issue for my mother." "I liked this magazine because I learned a lot about nature and I would like to have this magazine always because it's beautiful and in Science we did very interesting experiments." "I liked it a lot because it's interesting and pretty. I liked it also because it teaches many good things." "We used this magazine in Science class and I think I would never like to change it because it's a nice way to learn."

Only one School Questionnaire was received. Both the principal and curriculum coordinator completed it for this south Miami school. Both respondents indicated that the English version of Ranger Rick was in the school library, and both had read it two to four times and liked it a lot. They also liked the present Spanish version very much, liking most the pictures and stories and listing nothing that they liked least. In rating the various magazine features, they both checked "liked" for all features except the pictures which they rated as "liked very much." Neither recommended any changes. Both also had discussed the pilot study experience with students and reported that they, too, liked the magazine a lot. Given their very favorable reaction to the magazine and the lack of similar Spanish materials in the school, they recommended its continued use. Both recommended it be used in Science for grades 4 through 6 and in Spanish for grades 3 through 6; in Language Arts one recommended it be used in grades 3 through 6 and the other in grades 4 through 6. They also both affirmed its potential educational value for bilingual programs in these three subject areas.

The three teachers in this school also completed the Teacher Questionnaires. The descriptions of the students in the three classes were similar. All were Hispanic and at least 86% spoke Spanish at home. According to their teachers, they could speak and read Spanish "very well" and write it "pretty well." Most also could speak English at least "pretty well"; 65% of the 4th graders were rated as speaking it "very well," and 35% "somewhat"; 35% of the 5th and 6th graders were rated as speaking it "very well," 50% "pretty well," 20% "somewhat," and 5% "hardly at all." They were much less proficient in reading and writing English. Forty percent of the 4th-grade students were rated as performing these skills "somewhat," and 30% each "pretty well" and "very well." The ratings for the 5th and 6th graders varied somewhat for reading and writing English. Sixty percent of the 5th-grade students were described as reading and writing it "pretty well," and an additional 20% and 5% reading and writing it "very well," 15% and 30% performing only "somewhat," and 5% "hardly at all." Thirty-five percent of the 6th graders were rated as reading English "very well" and 40% "pretty well," with parallel percentages of 30% and 45% for writing skill; 20% and 5% were described as only able to perform these skills "somewhat" and "hardly at all," respectively. Most students in these three classes were enrolled in a bilingual program with 35%, 10%, and 25% of the 4th-, 5th- and 6th-grade students, respectively, reported to be in an ESL class.

The magazine was used in this school during a 30-minute Spanish for Spanish-speakers' class period. All the teachers read several articles to the students (four, five, and eight in the 4th, 5th, and 6th grade, respectively), but no one reported translating any of the Spanish. None of the teachers used the Activity Guide.

The teachers' reactions to the magazine were essentially identical. They all liked most the pictures and stories, which they described as "excellent", and listed nothing they liked least. They all recommended that if any changes were made, more individualized activities such as puzzles and games should be included. However, they thought all the features were "appropriate" and two teachers rated the pictures as "very appropriate." They also all indicated that their students had been actively engaged when the magazine was used, had liked best all the stories about the animals and disliked nothing, and had used the magazine further at home and/or in school. These three teachers also responded that their students had learned from the experience, but no specific information was provided.

Although they did not know if the English edition of Ranger Rick was currently in the school, two of the teachers had read it in school and had liked it a lot. They rated the present Spanish edition as "somewhat different" from their students' usual school materials, but did not specify in what way(s).

In response to their very favorable reaction to the magazine and the lack of similar Spanish materials in the school, they recommended its continued use in grades 3 through 6 for Spanish and grades 4 through 6 for Language Arts. These teachers all commented that the magazine had very interesting materials and the children enjoyed it, and they felt it had widespread potential educational value for bilingual programs--in Science, Social Studies, Language Arts, and Reading.

All seven teachers in the second south Miami school completed the Teacher Questionnaire. The magazine was used in three Spanish classes, three Spanish for Spanish speakers' classes, and one ESL Science class. To facilitate describing the Teacher Questionnaire findings, the following paragraphs summarize the data according to these three groups.

Sixty percent of the students in the three Spanish classes (a 4th, 5th, and 6th grade) were described as speaking Spanish "very well" and the remainder "pretty well." They were less proficient in reading and writing it, however, with 60% described as performing "pretty well" and 20% each "very well" and "somewhat." Their English proficiency was not described. At least 86% were enrolled in a bilingual or ESL program.

In these three classes the magazine was used one week daily for 25 minutes. All teachers used the same 11 articles, reading them to the students and translating a few words. No one used the Activity Guide. All said they enjoyed the magazine very much and noted that it was very informative and colorful. Nothing was reported as disliked, and no suggested changes were made. They agreed in rating all the magazine features as "appropriate."

They also all reported that their students appeared actively engaged when the magazine was used and enjoyed it, but that students had different preferences. They perceived nothing the students disliked and noted that they continued to use it at home. They also reported that their students had learned a lot, acquiring "new information from each page."

None of these teachers had read the English edition of Ranger Rick and they viewed the present issue as only "very slightly" different from their students' current instructional materials, since they already had learned many of the concepts in English. Nevertheless, their enthusiasm for the magazine and the reported lack of similar Spanish materials in the school led to their recommending that it be continued to be used in 4th- through 6th-grade Spanish classes. As the teachers noted: "I think it is of great value, interesting, informative"; and "It is interesting, beautiful and informative."

Students in the three Spanish for Spanish speakers' classes were described as speaking, reading, and writing Spanish "pretty well." The 5th- and 6th-grade students also were described as speaking, reading, and writing English "pretty well." Although the 4th-grade students also were described as reading and writing English "pretty well," they were rated as speaking it "very well." At least 86% of these students were in bilingual or ESL classes.

These teachers also used the magazine daily for a week during one 25-minute period. All read the "Search for Supersaurus" and "Backyard Dinosaurs?" articles; the 4th- and 5th-grade teachers also read the poems and the 4th-grade teacher in addition read "Piper Grows Up." The students in the two upper grades also used the "Build a Boxosaurus" article. According to the teachers, the articles were selected because of their titles and pictures. All three teachers said they translated a few of the Spanish words. None used the Activity Guide.

These teachers, too, were very favorable in their reaction to the magazine. All said they liked most the photographs and mentioned nothing they liked least or wanted changed. In rating the magazine's various features, all of them rated the pictures as "very appropriate" and the vocabulary and games as "appropriate"; the story topics were rated as "very appropriate" by two of the teachers and as "appropriate" by the other.

All three teachers also described their students as liking the magazine very much and being actively engaged during its presentation. The 4th-grade teacher said the students liked the photographs most as indicated by their comments. The other two teachers reported their students liked most the "Backyard Dinosaurs?" article and learning of the relationship of dinosaurs to present animals. None of them indicated anything the students did not like. They all agreed their students had learned from the magazine as evidenced by their interest in science and in solar energy, and "their amazement at the existence of the correlation between dinosaurs and present animals."

They perceived the present magazine as "somewhat different" from the students' other instructional materials by providing exposure to science and, according to one, "It's a magazine, the pictures, the variety, etc." No similar Spanish materials reportedly were in the school. Also, the English edition of Ranger Rick was not available, nor had any of them read it before. Given their own and their students' enjoyable experience with the present Spanish issue, they recommended it for continued use at least in 4th through 6th grade (and for two teachers up to the 8th grade) as enrichment in Spanish for Spanish speakers' classes. They viewed it as "a good complement to their education" and "to complement their Spanish and Science."

The seventh group participating in the study from this school was a 6th-grade ESL Science class. The students in this class were described as speaking, reading, and writing Spanish "very well," whereas their ability to speak English reportedly varied from "somewhat" to "very well" and their ability to read and write it from "somewhat" to "pretty well."

This teacher used the magazine for one 45-minute period, reading the "Search for Supersaurus" story because "We wanted to start from the beginning working towards the end." He/she reportedly translated only a few of the words. The Activity Guide also was not used by this teacher. When asked what was liked most, the teacher responded "everything"; he/she did not comment on what was liked least and said "nothing" needed to be changed. The pictures were rated as "very appropriate" and the other features as "appropriate," but the teacher remarked that some of the vocabulary and topics were somewhat difficult.

The students were similarly described as very enthusiastic about the magazine. The teacher reported that they liked best the pictures and the way it was written--"simple and funny (at times)." There was nothing they appeared to dislike. He/she also felt that they had learned many facts.

This teacher perceived the magazine as "very different" from the students' usual school materials because it was fun and easy to understand. He/she also reported there were no similar Spanish materials available in the school nor an English edition of Ranger Rick. This was the teacher's first experience with Ranger Rick, and since both he/she and the students found it so enjoyable, the teacher recommended its future use in grades 3 through 6 in Science, Spanish, and possibly also in Language Arts. For this particular ESL class, however, he/she noted that simple English would be preferable. Nevertheless, this teacher commented, "It is a wonderful young magazine. I would like to see it in the classrooms." He/she expressed concern, though, about what would happen if one decided to use it for six to eight weeks and then it ran out, and regretted not having the present issue long enough to enjoy with all his/her students.

The two classes participating in the Miami Beach school were part of the Bilingual Curriculum Center program. One was a combined 4th- and 5th-grade and the other a 6th-grade class; both were ESL classes. Students in the combined 4th- and 5th-grade class were described as speaking and reading Spanish "very well" and writing it "pretty well," but as only able to speak, read, and write English "somewhat." The 6th-grade students were characterized as speaking, reading, and writing Spanish "very well," but the teacher did not know how competent they were in English.

Both teachers used the magazine for 46 to 60 minutes over a two-week period during Language Arts, Science, and Spanish classes. The teacher of the younger group reported reading 11 articles, but not translating any of the Spanish. The 6th-grade teacher had the students use six of the articles and read two of them, translating a few Spanish words while doing so. Both teachers said they selected the articles used because the students were motivated by these particular readings. Both teachers used "all" of the Activity Guide and found it very helpful. They suggested, however, that there be fewer outside classroom activities.

They both reportedly enjoyed the magazine very much. The 4th-grade teacher liked most the story about condors. The 6th-grade teacher also especially liked the condor story and, in addition, the articles on fossils and diatoms. Both replied "none" when asked what they liked least. They suggested, however, that future issues include something about space and the planets. In rating the various features, the teacher for the younger group indicated they all were "very appropriate"; the 6th-grade teacher also rated the story topics and pictures as "very appropriate," but viewed the vocabulary and games somewhat less so and rated them as "appropriate."

Both teachers perceived their students as actively engaged when the magazine was used and as liking most the dinosaur articles as exemplified by their going to the library for further information, drawing pictures, writing reports, and building the carton dinosaur. Although the teacher for the combined 4th- and 5th-grade group reported there was nothing that the students liked least, the 6th-grade teacher said the poems were liked least. Both teachers stated that the magazine had helped the students learn to do research in the library, and when commenting on the magazine's educational value said that it helped the students learn about prehistoric animals, fossils, and other living animals.

The magazine was viewed by the two teachers as "somewhat" to "very different" from their students' regular school materials, but for the same reason--because it is updated and provides information based on recent research. Neither had read the English edition before nor was it available in the school. Given their very favorable response to the present issue, their students' enjoyment, and the lack of similar Spanish materials in the school, they both recommended it be used in grades 2 through 6 for Science and Spanish. The teacher of the younger group also recommended it be used in 4th-, 5th-, and 6th-grade Language Arts classes. Both teachers commented further that the use of this Spanish edition of Ranger Rick had been an excellent experience. As the one teacher said, "I enjoyed this magazine very much and so did my students. It was quite a learning experience for both."

Teachers for the 4th- and 5th-grade classes from the Hialeah area school also completed the Teacher Questionnaire. The student composition was described as being at least 86% Cuban, with the remainder from Argentina, the Dominican

Republic, Columbia, Nicaragua, Peru, and Puerto Rico. The 4th-grade students were described as speaking and reading Spanish "pretty well" and writing it "somewhat," but as only able to speak, read, and write English "somewhat." The 5th-grade students were rated as speaking Spanish "very well," but reading and writing it only "somewhat." They reportedly could speak, read, and write English "hardly at all." Students in both groups were enrolled in ESL classes.

In this school the magazine was used in a Health/Science period for 30 minutes on five consecutive days. The 4th-grade teacher had the students use three articles, and he/she read three others without translating any of the Spanish. The 5th-grade teacher had the students use two articles and read five additional ones to them; he/she reportedly translated a few of the words. Both teachers included the first two dinosaur articles and the hedgehogs story. The 4th-grade teacher had used the Activity Guide (community inquiry about dinosaurs) and said he/she found it helpful, but the 5th-grade teacher responded that the activities in the Guide were too complicated for the students to follow. Both teachers commented that it required too many things to be done outside the classroom.

The 4th-grade teacher said that he/she liked most the interesting way the material was presented and the vivid illustrations. The 5th-grade teacher also liked best the excellent pictures as well as the interesting articles. Both stated that what they liked least was that the vocabulary was too hard at times for the students. They also both suggested that future issues include some questions at the end of some of the articles regarding what had been learned.

Both teachers perceived their students as actively engaged when the magazine was used. The 4th-grade teacher reported that while reading the articles the students became excited over them, and this often led to class discussions.

The 5th-grade teacher also noted that the articles led to class discussion and added that the students especially liked the pictures. Although the 4th-grade teacher responded that the students had enjoyed everything and disliked nothing, the 5th-grade teacher stated that the students had a hard time understanding the meaning of the words. Both teachers agreed, however, that their students had learned from the experience as exemplified by their recalling facts during class discussions and relating what they read to their personal experiences. As an additional indicator of their enjoyment and interest, both teachers and students reportedly had taken the magazine home to share with their families.

As far as the teachers knew, there were no similar Spanish materials in the school, nor an English edition of Ranger Rick. Neither teacher had read Ranger Rick before, and they found the present issue "somewhat" to "very different" from the students' usual school materials because of its presentation, information, and motivating qualities. Both recommended its continued use. The 4th-grade teacher recommended it for 4th- through 6th-grade Science classes and possibly Spanish. The 5th-grade teacher recommended it be used in 5th- and 6th-grade Science and Spanish classes. In commenting on its educational value the 4th-grade teacher said, "It is motivating and interesting and also being in Spanish, the students' home language, they are able to enjoy them more while getting the most out of them academically." The 5th-grade teacher similarly responded, "Because of the students' lack of the English language, the magazine gives the students the opportunity of learning and enjoying them more."

Thus, in this urban sample of predominantly Cuban youngsters from very diverse backgrounds and competencies in Spanish and English, the magazine was enthusiastically received by school staff and students. It was found useful in a variety of curriculum areas and in both bilingual and ESL programs. The following two teachers' comments illustrate well the reactions of participants in this site. "I would like to continue using Ranger Rick regularly because of the educational content and the beautiful way it was presented. It's a good magazine and we enjoy working with it." "I would like very much to use Ranger Rick regularly, because I find it worthwhile, the children enjoy it and are able to learn from it even more than from just one source. I think that the fact that it is in Spanish is not the best of it. It is the educational content presented in an enjoyable way that makes it such a good magazine."

Illinois

Chicago. Following review and approval of the Ranger Rick study by the Bilingual/Bicultural Education Department of the Illinois State Board of Education and by the Assistant Superintendent in charge of curriculum and the Office of Research and Evaluation for the Chicago Board of Education, site visits were made by members of the Chicago Bilingual Office to locate schools of diverse characteristics currently serving Hispanic students that would be interested and able to fit the study into their schedules. Eight schools from this large midwestern city were able to participate in the study within the required time period. Some requested demographic information on students and schools is unavailable since Sample Description forms were not obtained from this site, but the schools were located in four different city school districts, and although serving a majority of Hispanic youth (74% to 83%), the student enrollment comprised different mixes of ethnic groups. The majority of Chicago Hispanic students participating in the study were of Puerto Rican background, but the percentage varied across schools from 32% to 65%.

At least one school served only kindergarten through 6th-grade students, whereas others included grades 7 and 8. The number of participating classes from each school varied from two to six. Two schools provided two classes each (one a combined 3rd and 4th grade and a 4th grade, and the other a combined 5th and 6th grade and a 4th grade); two provided three classes each (both a combined 4th and 5th grade and a combined 7th and 8th grade, and one a combined 5th and 6th grade and the other a combined 5th through 7th grade); two provided four classes each (one with two 4th grades, a combined 4th and 5th grade, and a combined 5th and 6th grade, and the other with a 4th grade, a combined 4th and 5th grade, a combined 4th through 6th grade, and a combined 6th through 8th grade); and two schools provided six classes each (one with two 4th grades, a 5th grade, a combined 5th and 6th grade, a combined 7th and 8th grade, and a combined 4th through 8th grade, and the other with one 4th grade, a combined 3rd and 4th grade, a combined 3rd through 5th grade, a combined 4th and 5th grade, a combined 5th and 6th grade, and a combined 4th through 6th grade). Class sizes also varied in each of the eight schools and ranged in order from 25 each, 26 to 39, 28 to 34, 26 to 30, 18 to 26, 19 to 34, 4 to 27, and 25 to 32. The three groups with less than 10 students all came from the same large school.

The total number of Chicago students who responded to the Student Questionnaire was 736; 572 (78%) were in the 3rd through 6th grade and 164 (22%) in the 7th or 8th grade or a class consisting at least in part of these older students. Fifty-four percent of the total sample identified themselves as females and 43% as males; approximately the same percentages occurred for the 3rd- through 6th-grade subgroup (53% vs. 45%), with a somewhat larger discrepancy for the older group (55% vs. 37%). Only five classes had more boys and these were scattered across four schools, with four of the five classes comprised at least in part of 4th graders.

Only 16% of the total sample had seen the English edition of Ranger Rick; most of them had seen it at school and only once, and only 16 of the 116 said they "did not like it" or "neither liked nor disliked it." The students who said they had seen Ranger Rick before were scattered across classes and schools, with similar percentages for both age subgroups. However, one combined 4th and 5th grade, in which all reported seeing it once in school and liking it, and 59% of a combined 7th and 8th grade (in another school) who reported reading it several times both at home and school comprised 43% of the students who had seen the magazine before.

In this Chicago sample almost all the students (95%) reported speaking Spanish in their homes, and 73% said they could read it "very well" (39%) or "pretty well" (34%); only 3% (20 students, 19 of them 4th graders) said they could "not read it at all." This pattern was generally consistent across schools and age groups, with the exception that in the older group only one student reported not speaking Spanish at home, a slightly higher percentage of them (42% vs. 38%) stated they could read Spanish "very well," and none reported not reading it at all. Similarly, almost two-thirds (63%) of the sample said they found the Spanish in the magazine "easy," 24% said it was "neither difficult nor easy," and 13% said it was "difficult." Again, a higher percentage of the older group stated it was "easy" (70% vs. 60%), and very few replied it was "difficult" (2% vs. 16%). Although classes within schools varied in their reported ease in reading Spanish, two 4th-grade classes in different schools accounted for 40 of the 89 students in the 4th-through 6th-grade age group who said the Spanish in the magazine was difficult; in the one class all responded it was difficult.

Using percentages based on the total sample, half of the students said the teacher did and approximately half said he/she did not read any articles to them (50% vs. 49%). This differed, however, by school (with two schools having no classes where the teacher reportedly read to the students and two where he/she did), by class within the remaining schools, and by age group (with 58% of the 4th- through 6th-grade group and only 21% of the older group who said "yes"). As would be expected, the teacher read to the students in the two 4th-grade classes where the students expressed the most difficulty reading Spanish. In general, a smaller percentage of the teachers (40%) reportedly translated any of the Spanish. Consistent with the students' stated reading abilities, this varied greatly by age group, with teachers reportedly doing so for 47% of the 4th- through 6th-grade group, but for only 18% of the older students. When translation was done, according to half the students (or 20% of the total sample) it usually involved only a few words.

Fifty-five percent of the students said they did further magazine-related activities in school. Again, this differed by school and by class within some schools. Overall, more older students said they did further activities in school than did the younger age group (65% vs. 52%), but five of the nine classes in which all the students said they did more were at least partially comprised of 4th graders. The dinosaur article was mentioned most often (17%) as being used and the "Build a Boxosaurus" and puzzle activities next most frequently mentioned (by 11% and 9% of the total sample, respectively). The dinosaur story was listed most by the 4th through 6th graders (19%), and the "Build a Boxosaurus" and puzzles by the 7th and 8th graders (17% each). The older group also gave a much higher percentage of "other" responses than did the younger group (13% vs. 1% based on the total sample), but 20 of the 22 older students included in this category said they "read everything." It should be noted, however, that although in three classes all or almost all students mentioned the dinosaur article, in other classes everyone mentioned a different article (e.g., the hedgehogs story or "Ranger Rick and His Friends"), or no one story or feature predominated and a variety were mentioned.

In describing what they did, building a carton dinosaur and drawing were mentioned most overall (by 15% and 13%, respectively), but activities differed by age groups and by classes within and across schools. The most frequent response for the 4th- through 6th-grade group was drawing; based on the total sample, 17% of this group responded in that category versus 1% in the older group. Although similar percentages in both groups mentioned building the Boxosaurus (14% vs. 17% for the younger and older groups, respectively), a larger percentage of the older group listed doing further research and reading than did the younger group (14% and 10% vs. 7% and 3%, respectively). The most frequent category used by the older group was "other," with "tests" being the most common response in that category. Again, the differences across classes in the nature and extent of what was done should be noted, with only one activity being mentioned in some classes (e.g., drawing, going to the museum, taking a test, reading) and several different activities such as reading, drawing, writing reports, building dinosaur models, and so forth listed in others. One 5th grader who described writing a report on dinosaurs and drawing an illustration for it added, "it was the best activity I ever had."

Fewer students (33%) reported doing magazine-related activities outside school. Again, this varied both within and across schools. Also, on the average, a larger percentage of classes with 7th- and 8th-grade students reported such activities than did those with 4th, 5th, and 6th graders (41% vs. 31%). The "Search for Supersaurus" article was mentioned most by both grade subgroups (by 18% of the older group and by 6% of the younger group), but for the younger subgroup the puzzles were equally often mentioned, followed by the hedgehogs story (4%); for the older students,"Build a Boxosaurus" was the article with the second highest response frequency (12%). These various rankings, however, were usually determined by those classes in which students primarily gave the same response (e.g., the hedgehogs story by all students in one 4th-grade class and "Ollie Otter's Fun Pages" by everyone in a combined 3rd- through 5th-grade class). Similarly, activities varied across classes and age groups. Reading was mentioned most overall (by 11% of the total sample), but this was due to its being mentioned most in the 4th- through 6th-grade subgroup which was much larger than the 7th- and 8th-grade subgroup. For the older group, building a model dinosaur and doing further research on the articles read were mentioned most (by 18% and 14% of this group, respectively). Several mentioned doing experiments at home; for example, "helping a grape lose weight" and "painted the cold water pipe black and made water run hot." Others remarked that they "went home and read this fantastic magazine" and "read it at home to learn more." Again, in some classes only one or two activities were mentioned, whereas in others, students reported a number of different activities. Among the responses in the "other" category were a visit to the zoo by one of the 4th-grade classes and one student's comment that he/she started asking questions.

Slightly over half of the students (55%) reported discussing the magazine with their families and/or friends. Although classes varied within schools, in general a larger percentage of the 4th- through 6th-grade group did so than the older youth (59% vs. 43%). Using percentages based on the total sample, the "Search for Supersaurus," "Backyard Dinosaurs?" and hedgehog stories were discussed most often (by 18%, 12%, and 7%, respectively). This was a consistent pattern across age groups. Again, in some classes students gave only one or two responses, whereas in others, students mentioned many different parts of the magazine. Many students, however, did not specify what they discussed, so that the percentages are not only lower but may be misleading.

When asked what they had learned, the most common responses across classes referred to nature or animals in general (26%), specific story titles or topics (20%), story facts (19%), or science topics (12%). The rankings of these categories differed across age groups, however. For the 4th- through 6th-grade group, general references to animals and story titles were given most often (by 29% and 23%, respectively), followed by story facts (14%) and science topics (10%); for the 7th- and 8th-grade group, story facts were given by 35%, followed by science topics (19%), general statements about nature and/or animals (16%), and story titles (9%). A number of students also mentioned learning about caring for animals and the environment, various scientific methods, new vocabulary, and not being afraid of the unfamiliar.

In some classes, particularly at the youngest grade level, the students gave essentially the same response with reference to a single story (e.g., how hedgehogs eat and live); in other classes, students provided several different specific facts. In one combined 5th- and 6th-grade class particular attention was paid to the social and emotional areas, as several students mentioned that they had learned not to be afraid (e.g., "we must get used to looking at big things or animals so we will never feel fear") and that "we should make friends and help each other." Conservation issues were apparently particularly stressed in a combined 7th- and 8th-grade group, as several students in that class stated that they had learned to value animals more and to save energy. As one student responded, "I learned how to take care of an animal and for all life and how we can save energy and not squander it." Twenty percent of the sample gave vague or "other" responses. Among the "other" responses were many comments about enjoying the magazine and finding it interesting, as well as statements by several 4th graders that they liked the cover best. One 5th grader said, "The schoolbooks are make-believe stories just to learn to read. This book tells you true stories."

In describing what they liked most in the magazine, the response given most frequently by the total group (21%) and the grade subgroups was the dinosaur article. The second most frequent response for the total sample (16%) was the "Ranger Rick and His Friends" story, with the "Sea Poems," "Search for Supersaurus," and the hedgehogs articles also mentioned by at least 10% of the students. When examining subtotals for the 4th- through 6th-grade group and the 7th- and 8th-grade group, a few differences emerged. For the younger group, the "Sea Poems" and the hedgehogs story were mentioned by 15% and 12%, respectively, but only by 6% and 5%, respectively, of the older group, whereas "Search for Supersaurus" was listed by 21% of the older group, but only by 11% of the younger group. In addition, 10% of the 7th and 8th graders said they liked the variety in the magazine; this feature was mentioned by only 5% of the students in the lower grades. Again, different classes evidenced different preferences. This is probably due at least in part to the fact that classes used different sections of the magazine. With the exception of the "Dear Ranger Rick" feature, every article was mentioned as a favorite one by at least two students. Students also referred to the animals or stories in general, the various activities, the vocabulary, and to the magazine being about science.

Students gave many fewer responses in describing what they liked least. The most common response overall (27%) and for each of the grade subgroups

(28% and 22% of the 4th- through 6th-grade and 7th- and 8th-grade groups, respectively) was "I liked everything" or "There was nothing I liked least." Of those articles listed, the most frequent one overall and for the grade subgroups was the "April Foolers" feature. The second most frequent response was the hedgehogs story (9%), but this was primarily due to the older students, 20% of whom listed it as contrasted with only 5% of the younger group. Eight percent of the younger students, however, said they disliked the vocabulary, whereas none of the older group did. In one combined 3rd- and 4th-grade group, almost everyone said they liked least the "hard" vocabulary. No other article or feature was mentioned by more than five percent of the total sample or either of the grade subgroups. In responding to both what was liked most and what was liked least there was considerable variability across classes in the number of different responses given. Also, within the same class there were different students who liked most and least the same articles as well as those students who mentioned the same story as both liked most and least. For example, several students mentioned they liked most the "Ranger Rick and His Friends" story, but that they liked least the different ways people killed condors. Some students explained that they did not like a particular article because they did not understand it (e.g., the diatoms); one student listed the "Green Velvet Princess" story and then commented, "because I liked so much the others." Among responses in the "other" category were references to homework assignments rather than to the magazine itself.

The majority of students said they liked the various magazine features listed. The stories and pictures were rated as "liked" by the most students (81% and 80%, respectively), with 71% of the sample saying they liked the games, 64% the variety, and 61% the vocabulary. With the exception of the vocabulary rating, this pattern was generally consistent across the two grade subgroups. Although ranked fourth, vocabulary was rated as "liked" by 71% of the 7th and 8th graders, but only by 61% of the students in the lower grades. For the former group, variety, which was in fifth place, was rated as "liked" by only 59% of the students and by 64% of the latter group. In general, however, the older students gave a higher percentage of "like" ratings. Vocabulary received the most "dislike" ratings, but of the 126 students who said they disliked it (17% of the total sample), 114 were in the 4th- through 6th-grade subgroup, particularly in the youngest grade level. Approximately all the students in a combined 3rd- and 4th-grade group and two 4th-grade classes said they disliked it. Similarly, of the 44 students (6% of the sample) who stated they disliked the games and activities, which received the next highest number of "dislike" ratings, 43 also were in the lower grades.

When asked in what ways this Ranger Rick magazine was different from their regular school materials, the largest percentage of students overall listed the pictures (29%). Other frequent responses were that it was interesting and entertaining (14%), had different stories (12%), was about nature and animals (10%), was informative and taught a lot (9%), and was attractive and colorful (9%). Six percent of the students mentioned its variety and how much they liked it. Although these were the more common responses in both grade level subgroups, the rankings differed somewhat. Twenty-seven percent of the 7th and 8th graders versus 10% of the 4th through 6th graders pointed out how much more interesting Ranger Rick was, and a larger percentage of them also pointed out how informative it was (16% vs. 6%), whereas twice the percentage of students in the lower grade levels listed the pictures (33% vs. 16%). Also, 10% of the older students listed the inclusion of games and activities, and 7%

mentioned that it was easier and explained things better, whereas only 2% of the 4th- through 6th-grade group did; these differences probably reflect not only different interests, knowledge, and abilities to differentiate in the two subgroups (e.g., only one student in the school with only a combined 3rd- and 4th- and a 4th-grade class responded to this question), but also differences in the instructional materials used at different levels. Other differences in the magazine noted, but to a lesser extent, were the use of Spanish, its size, and its name. Twelve percent of the sample also gave vague responses such as "it's different" or ones that did not fit into the present categories such as the fact that it was a magazine, that it used different print, and was "important."

Some of the students' actual responses may provide greater meaning to these general statements. One 4th grader said, "This book is about real life--the others are fairy tales." Another 4th grader noted, "The pictures teach us a lot of what we're going to read." A 5th grader commented that "the social studies book has more pages than this one and only talks about war. This is a nice book that has good drawings in it." The most salient difference for one 7th grader was that "It explains things in a way which you can understand," whereas another stated, "It provides more information on nature than Science books, and the vocabulary is easier." One 8th grader said, "I never had in my hand a book that told me so much about nature and what is very important." A 7th grader similarly noted, "We never were told in school about these things we learned when we read this magazine." Two younger students said, "It's very interesting and important because I get Spanish and English," and "It teaches us with things to do." Finally, a 7th grader responded, "It's different because it's interesting and leaves you with the desire to learn more!"

Given these very favorable responses to the magazine, it is not surprising that almost all the students (91%) said they wanted to continue receiving it. Only 18 students said they did not and 15 that they did not care; almost all of these were in the 4th- through 6th-grade group (17 and 12, respectively), with one 4th-grade class and a combined 5th- and 6th-grade group in another school accounting for most of these responses. Overall, a slightly higher percentage of students preferred receiving future issues in both Spanish and English than in Spanish only (42% vs. 36%). Examination of the two grade level subgroups, however, indicated a much larger difference for the older group (52% vs. 34%) than for the younger group (39% vs. 37%). Consistent with their greater difficulty with the vocabulary, the percentage of students who preferred to receive it in English only was also twice as much for the younger group than for the older group (13% vs. 6%). Both for the total sample and for the grade level subgroups, more students said they preferred to use it in school rather than at home (63% vs. 49%); 12% said they wanted to use it in other places such as the park, beach, library, and other relatives' or friends' homes. A higher percentage of the 4th- through 6th-grade group than the 7th- and 8th-grade group indicated they would like to use it at home (51% vs. 43%). In interpreting these group differences it must be pointed out, however, that differences in language and location preferences occurred both within and across schools. Also, some students gave rationales for their choice of location: "At home because more tranquil and at school because can explain"; "At school because this way we can help each other"; "At home because I like to read whenever I can"; and "At home to read different parts and talk with my family." Several said they chose school "because the teacher explains what we don't understand."

Although they wanted to continue receiving the magazine, 30% of the students said there were some changes they would like in future issues. As might be expected given the greater experience, knowledge, and willingness to be critical that is usually associated with age, a higher percentage of the 7th- and 8th-grade group recommended changes than did those in the lower grade levels (37% vs. 28%). The most frequently mentioned change (by 6% of the sample) was to make it easier, but this was mentioned only by the younger subgroup, specifically the combined 3rd- and 4th-grade group and one 4th-grade class. The next most frequently recommended changes were specific pictures such as in the "April Foolers" section and specific articles (4% each). Other suggested changes were adding more pictures, stories, games, or poems, using English, and including other animals such as horses and dogs. Although a 4th-grade student desired shorter articles, a 7th-grade student requested that they be longer with more detailed information provided. One fifth grader, in contrast to his classmates, said, "Please do not change the Yowza picture," and an older student requested, "They put some stories I would write on my own."

Consistent with their expressed wish to continue receiving Ranger Rick, at least 6% of the sample recommended it for future use in each of the elementary school grade levels from kindergarten through 8th grade. Since students tended to give higher priority to their own grade level, the 4th, 5th, and 6th grades received the most recommendations (61%, 60%, and 56%, respectively) given the greater number of study participants in those grades.

Most of the students also made additional comments upon completion of the questionnaire. Many reiterated how much they had enjoyed the pretty pictures, interesting stories, and learning new words and about animals they had never heard about; they also reiterated their desire to receive more copies. The following quotes from different classes exemplify the comments of many. "I learned things I knew nothing about. One look at the magazine and I knew I was going to like it." "I liked it very much for its stories. They were both colorful and interesting. It's the most interesting ever given in class." "I think it's fun to read this magazine. I like the pictures and stories and I discussed it with my friends at school." "At the same time I was learning I was having a lot of fun." "This magazine is very good to learn more about science and nature. It contains different kinds of stories that have great interest--themes interesting and people interesting--you learn about the animals. The photos teach us reality of each thing and others encourage imagination with drawings, and will help us in the future. Thank you." "I wish this book would not be the only pretty book there is. I would like that there would be others like this one. I love it and learned a lot about nature. I used it as a Science book. I enjoyed what the people did and also the imaginary things." "It's the first book in Spanish I have liked. At first I thought I wasn't going to like it. I learned much on dinosaurs." "I liked it for its nature and animal stories, use of solar energy, and information of animals unknown to me. Should have more books like this in school." " I enjoyed it more than any other book I have ever read. It's the best! I recommend it for other children." "I was very happy with the magazine because it's interesting and I like the photographs. But most I like the dinosaurs and hedgehogs. Wish they would continue mailing it to us free of charge." "I learned to appreciate nature and life." "The magazine is very educational and you learn a great deal from the stories. The magazine is well organized and the photos are very pretty." "It's good and it helped us in school to read, study, and write." "I liked it because I can read more and learn more things." "I used it in Science, Spanish, Social Studies, and Art. In Science for the animals, in Spanish for comprehension and interpretation, in Art, the drawing and to make the Boxosaurus, in Geography, situations where animals are found." "I think it's very easy, very pretty, and very interesting. The stories on Supersaurus' fossils increase my desire to study more." From a class where almost all the students said they could read Spanish "only a little bit" or "not at all," a student said, "The reading is good to improve my reading and tells things about things I never knew." And a final very expressive comment from a 4th grader, "When I read this book, I felt like I was playing in the park. I enjoyed it a lot."

School Questionnaires were completed by only three of the eight schools; these schools included 12 of the 30 participating classes. They varied in enrollment, number of participating classes, and grade levels represented. One school had six groups representing 4th through 8th grade participating in the study; another included four classes for students in grades 4, 5 and 6; and the third included one 4th- and one 5th-grade class. The questionnaires were completed by individuals in different staff positions--a principal, an ESL teacher, and a teacher who helps coordinate the bilingual program in his/her school. The principal was the only one who had read the English edition of Ranger Rick before, and he/she had done so frequently both at home and school and had liked it a lot. It was not presently available, however, in any of the schools.

All three respondents liked the present issue of Ranger Rick. In responding to what they liked most, one noted the color photos and the story level and variety, another referred to the information provided and the pictures, and the third said it was "interesting." When asked what they liked least, they said "nothing" or that they "liked it all." Only two of them rated the various features; one rated them all as "liked very much," whereas the other rated the pictures as "liked very much," the vocabulary and variety as "liked," the interest level of the stories as "neither liked nor disliked," and did not rate the games. Additional games and puzzles and simpler vocabulary were two suggested changes. Two of the staff had discussed the magazine with the students and they, too, reportedly enjoyed this edition of Ranger Rick.

Given their favorable reactions and the reported lack of any similar Spanish materials in their schools, they all recommended the magazine's continued use in different subject areas at various grade levels. The specific recommendations differed, however. One staff member recommended its use in Language Arts, Science, and Spanish for grades 1 through 8, as well as an English version for ESL students. The two other respondents both recommended its use in grades 3 through 6 for Language Arts and Science, with one also recommending it be used for Spanish in these same grades and the other recommending it be used for Spanish only in grades 5 and 6.

All three perceived the magazine's positive educational value: "It has good cultural value. Nice photos. Gives students a chance to read something that seems to be written on a higher level"; "It's fine, but (as a K-6 school) we can only use it in two classrooms because the language level is so high"; and "This magazine is very useful in a classroom. The information is up-to-date and the pictures are wonderful. The children love it." They also saw its potential use in a bilingual program: "Much potential as a vocabulary builder"; "It is very useful in a bilingual program. The magazine can be used to teach reading in Spanish, Social Studies, etc."; and "We could use a hundred copies a month." Only one person commented on its potential use in an ESL program.

"As an ESL teacher, I get very few magazines for student use. I would appreciate having such material in my area. English copies would help." The one teacher's final comment summarizes well the favorable reactions these three staff members had to the magazine. "I enjoyed the magazine. The children really liked it. I would like to continue using it. Thank you for letting me know about this magazine."

Teacher Questionnaires were completed for all but one of the 30 classes. Given the variety of responses within and across schools, to simplify reading findings are presented by schools, beginning with those with the smallest number of participating classes.

As noted earlier, the magazine was used in two schools with two classes each representing students from 3rd through 6th grade. In the one school, both the combined 3rd- and 4th-grade group and the 4th- through 6th-grade group were described as speaking Spanish "pretty well" and reading and writing it "somewhat." Their competencies in English, however, differed. The younger group was rated as speaking, reading, and writing it "pretty well," and the older group as only able to perform these skills "somewhat." At least 86% of both groups were Hispanic, spoke Spanish in their homes, and were enrolled in a bilingual program. Some of the younger students also were described as being in an ESL or transitional program.

In both classes the magazine was used during a Science class for at least 90 minutes. Eight articles were used, selected both for their science value and the students' interest. The teacher of the younger group read four of them, and the other teacher read them all; the former teacher reportedly translated most of the Spanish and the latter about half of it. Neither teacher had used the Activity Guide.

Both teachers said they enjoyed the magazine. One especially liked the colorful illustrations and format and the "Search for Supersaurus," "Happy Bee," and "Rare Wonders" articles; the other teacher listed the "April Foolers," "Search for Supersaurus," hedgehogs story, and games. Only one teacher noted anything liked least ("Diatoms"), although when asked to suggest changes, the teacher of the younger group requested easier reading. In rating the various magazine features, both viewed the vocabulary as too difficult and thus "somewhat inappropriate." Although the games were viewed as not easy by the teacher for the younger students, they were rated as "appropriate"; the other teacher did not rate them. The story topics were rated as "appropriate" by one, but were not rated at all by the other. The pictures were rated as "appropriate" and "very appropriate."

Their students, too reportedly enjoyed the magazine, with the section on dinosaurs mentioned as liked most by both groups. The younger students also appeared to especially like the pictures. In responding to what their students liked least, reading was listed for the younger students since "they could not read the big words"; the "Diatoms" article was noted for the older students due to the fact that they did not know much about it. Both groups, however, were described as doing further reading--rereading stories from class or reading those they missed. Also, both teachers perceived their students as having learned from this relatively brief experience. ("They learned about dinosaurs and different animals"; and "They were motivated to learn more about animals and nature in general.")

Both teachers described the magazine as "somewhat different" from their students' usual instructional materials because there were more pictures. There was neither an English edition of Ranger Rick available in the school, nor had they read it before. Given the pleasure they and their students experienced with this issue and the lack of similar Spanish materials in the school, they both recommended that it be continued at their grade level--for 3rd-grade Language Arts, Science and Spanish, and for 4th- through 6th-grade Science and Spanish. Both viewed it as having educational value. The one teacher said, "The vocabulary was hard for them to read. But I feel that this book is very good for Science and Nature Research. I feel this book should be used in a classroom." The other teacher, while also noting that the Spanish vocabulary was somewhat difficult for the students to read, said, "But I feel that the Spanish edition will be good for those with limited English proficiency. The school should also have an English edition for those students with more English proficiency than Spanish." Both teachers commented that it would help greatly the Science component of the bilingual curriculum.

The other school with two participating classes, one 4th grade and one combined 5th- and 6th-grade group, served students with stronger Spanish and English competencies and used the magazine somewhat differently, but teachers and students were equally or more positive in their reactions. The students in both classes were described as speaking Spanish "very well." Although the older students also were rated as reading and writing it "very well," 50% and 40%, respectively, of the 4th graders were rated as reading and writing it "very well" and the remainder as doing "pretty well." Most of the 4th graders were described as speaking, reading, and writing English "pretty well" (76%, 64%, and 72%, respectively); the 5th- and 6th-grade group also were rated as speaking and reading English "pretty well," but as writing it only "somewhat." The 4th-grade students were all enrolled in a bilingual program, whereas the older students were in a bilingual or ESL program.

In the two classes the magazine was used not only during different subject periods, but for different amounts of time and in different ways. The 4th-grade teacher spent more than 90 minutes during Spanish, Language Arts, and Science to use nine of the articles. He/she read five of them, but did not translate any of the Spanish. The articles selected were those viewed as "the more informative articles" and "the ones that could most add to the students' education." The 5th- and 6th-grade group used all of the magazine during a 30 to 45 minute period, but the teacher did not read any of the articles and translated only a few words. According to the teacher, all the articles were selected because "they all were relevant to what the children have been studying. We found reading and discussing them pertinent to our class." Both teachers used the Activity Guide. One used activities related to the "Sea Poems," "How Long until Sundown," and "Watch for North"; the other used the extra information provided and "Para Llega a Saber Mas." Both found the Guide helpful and suggested no changes.

These two teachers were very enthusiastic about the magazine. The one teacher stated, "I liked everything about the issue." The other liked best the dinosaur articles as they were "most informative as well as interesting." Neither mentioned anything liked least. ("Really no portion of the magazine I could put in this category.") The only suggested change was to add a crossword puzzle that would involve all the articles included in the magazine. In general, they also rated the various features of the magazine highly. The teacher for the older group rated them all as "very appropriate." The 4th-grade teacher also rated the story topics ("very interesting") and pictures ("beautiful") as "very appropriate," but the vocabulary was rated slightly less highly, although "appropriate," and the games were described as "somewhat inappropriate" since they needed some explanation.

Both teachers also reported that their students were actively engaged during the magazine's use. The 4th-grade group reportedly liked best the dinosaur articles, as evidenced by their asking many questions about the stories and wanting more information on them; the other teacher did not specify what his/her students liked best, but noted that "there was much enjoyment and interest on the part of the students and they seemed to realize that learning is fun." Neither mentioned anything the students liked least. As additional evidence of their enthusiasm for the magazine, both teachers noted that both they and their students did further follow-up activities such as doing the puzzles and reading those sections not covered in class. They also felt their students had learned from the experience; for example, they learned about solar energy, dinosaurs, and other animals, and their participation in class discussions was high.

Both viewed the magazine as different from their students' usual school materials. One teacher rated it as "somewhat different" by "simply providing another source of information"; the other one thought it was "very different" because of the variety of situations presented.. The school did not have available the English edition of Ranger Rick, although one of the teachers had read it before at home several times and liked it a little. Also, there reportedly were no similar Spanish materials in the school. Thus, they both strongly recommended the continued use of a Spanish edition of Ranger Rick in Language Arts, Science, and Spanish. The one teacher suggested its future use in grades 4 through 6 and the other in grades 5 and 6.

Their comments as to its educational value best express the positive experience this pilot use of the Spanish edition of Ranger Rick was for them and their students. "There is a good range of scientific articles for the students.

The quality of the paper and the photographs is excellent, which makes the students feel they are receiving an educational tool. The personalizing of the animals helps them to keep up a better interest level in reading some of the articles." "A very informative and highly motivating magazine. It held the children's interest from beginning to end. The variety of activities were well worth the time taken to do them." Both teachers also perceived its valuable potential use for bilingual programs. "It provides a good variety of interesting articles and can be used for both Science and Spanish Language Arts." "Most useful, informative, high interest, variety of activities all made this a valuable and worthwhile magazine." The one teacher also noted some potential value for ESL programs. "The photos can be used to practice oral English, but the fact that the text is in Spanish makes it a less than valuable tool for ESL."

There also were two schools with three participating classes, each having a combined 4th- and 5th-grade and a combined 7th- and 8th-grade class, with one also having a combined 5th- and 6th-grade, and the other a combined 5th-, 6th-, and 7th-grade class. As the following description of the findings from the Teacher Questionnaires indicate, differences in student characteristics and use of the magazine varied both within and across schools, but the generally favorable response to the magazine by staff and students did not.

In the one school, although three Class Transmittal forms were forwarded, only two Teacher Questionnaires were completed. Since similarities in handwriting suggested that one of the teachers taught two of the classes, the teachers' reactions may be representative of all three classes; some of the student data, however, remain lacking. Eighty-six percent or more of the students in each of the classes were Hispanic and spoke Spanish in their homes; all were enrolled in a bilingual or transitional program. Although we do not know the level of the youngest students' Spanish and English skills, 99% of the students in the combined 5th- through 7th-grade class were described as speaking Spanish "very well" and 50% of them as also reading and writing it "very well," with 45% and 40%, respectively, doing it "pretty well." In English, however, only 25% were described as speaking, reading, and writing "very well"; 50% were described as speaking it "hardly at all." The teacher said he/she did not know the English reading and writing skills of the remaining students. The majority of students in the combined 7th and 8th grade were also described as speaking Spanish "very well" (60%), with an additional 30% speaking it "pretty well." Half of them were rated as reading Spanish "very well" and an additional 40% as reading it "pretty well"; the respective percentages for writing Spanish were 20% and 70%. Although 60% reportedly could speak English "pretty well," 50% and 79%, respectively, were described as able to read and write it only "somewhat"; 20% were rated as performing these skills "hardly at all."

All three classes in this school used the magazine about 30 minutes daily for a week during the Science period. The one teacher noted that it was also used for Reading, Spanish, and Arithmetic. All articles were used in the combined 5th-, 6th-, and 7th-grade class and all but the "Piper Grows Up" story in the 7th- and 8th-grade class; in neither class did the teacher reportedly read any of the stories nor translate any of the Spanish. Neither teacher used the Activity Guide, but the one teacher noted that it was necessary, and although there had been insufficient time to use it, he/she read it later for future aid.

Both teachers responded favorably to the magazine. The one teacher said he/she liked best "the organization, the vocabulary which was more or less at grade level, that the pictures with bright colors were great motivation for reading, and the material and related information for further reading"; the other teacher especially liked the "Search for Supersaurus" story. In responding to what they liked least, one teacher commented that there was not enough time "to examine minutely and make use of the valuable information presented," and the other said there was need for more written materials. Both teachers recommended more student activities such as guides, questions, or crossword puzzles at the end of some selections to reinforce the students' vocabulary and comprehension, as well as activities for self-evaluation. The one teacher rated all the magazine features as "very appropriate," but the other teacher left the item blank.

In describing their students' reactions, both teachers reported they were actively engaged during the magazine's use, and appeared to like most the colored pictures. The teacher for the 5th-, 6th-, and 7th-grade group also stated that the students were interested in the study of nature and the animal theme and, as additional evidence of their interest, had taken the magazine home to read. These teachers also perceived their students as having learned from using the magazine, as evidenced by their recall of facts and by "their spontaneous conversation, interest in continuing learning, and their different concepts while talking."

Neither teacher knew whether the English edition of Ranger Rick was in the school, nor had they read it before. They viewed the present issue as "somewhat different" from their students' usual classroom materials because, according to one, "of its presentation, vocabulary, and colored pictures to associate information," and to the other, "it doesn't fit the 7th- and 8th-grade curriculum." Neither knew, however, if there were similar Spanish materials in the school.

Nevertheless, they recommended the continued use of a Spanish edition of Ranger Rick in the middle-school grades in more than just Science. The one teacher recommended it for 4th- through 6th-grade Science and Spanish, and the other one recommended it for 4th- through 6th-grade Science and Language Arts. Both teachers perceived its potential educational value as a supplementary tool. One teacher commented, "It fulfills the needs of the Spanish-speaking students." The other teacher said, "The magazine was very interesting as a supplementary Science magazine. Format is a little immature for 7th and 8th graders. Articles on fossils and diatoms very suitable and interesting to 7th and 8th graders since it reinforces the Science curriculum. Most articles do not fit into the Science curriculum for upper grades but are good supplementary reading and science enrichment."

At least 86% of the students in the three classes in the other school also were Hispanic and spoke Spanish in their homes, and all were enrolled in a bilingual program. With the exception of one class, their Spanish and English skills were less developed than those of the students in the previously described schools. Students in the combined 4th and 5th grade were described as speaking and reading Spanish "pretty well" and writing it "somewhat," but speaking, reading, and writing English "hardly at all." All students in the combined 5th- and 6th-grade class, however, were rated as speaking Spanish "very well," and 90% of them as reading and writing it "pretty well." Half of them were described as speaking English "pretty well," with another 40% speaking it "somewhat." Seventy percent were rated as reading and writing it "somewhat" and 25% of them as "hardly at all." Ninety percent of the students in the combined 7th and 8th grade were rated by their teacher, who was the Bilingual Coordinator, as speaking Spanish "pretty well"; 80% were rated as reading and writing it only "somewhat" and 10% "hardly at all." Only 50% reportedly could speak English "somewhat" and 30% "hardly at all"; the parallel figures for reading and writing English were 60% and 30%, and 35% and 60%.

The magazine was used in the 4th- and 5th-grade class during their Spanish period for 76 to 90 minutes. The teacher read but did not translate the "Search for Supersaurus" story and "Dear Ranger Rick" article "to teach the students the importance of discovering fossils and to explain the reasons to wrap all the bones in chalk and also to teach the importance of how to express their own opinion and ideas after they read any stories." The teachers for the combined 5th- and 6th- and combined 7th- and 8th-grade groups spent more than 90 minutes with the magazine during Science and Spanish, the former reading five of the stories and having the students read more on their own, and the latter reading 10 of them, including translating some words. Two of the teachers used the Activity Guide to introduce activities and different points of view, and they both reportedly found it helpful.

All three teachers were enthusiastic about the magazine. One teacher said he/she liked "the whole magazine." Another commented, "This magazine has different topics to discuss and good motivation pictures," and the third said that what he/she liked best was "the way it is developing ideas and the identity of specific details." All three responded there was nothing they liked least. The only suggested change was that future issues include more current news. As one teacher noted, "Every section was very clear and understandable." In rating the various features, the teachers for the two lower grade levels described all as "appropriate." The 7th- and 8th-grade teacher rated the vocabulary and story topics as "very appropriate," the former for etymology study and the latter for promoting attitudes toward the themes; the games were rated "appropriate" and "encouraging", as were the pictures which were considered "fascinating."

The students in all three classes also were described as enjoying the magazine. Both the combined 4th- and 5th-grade and the 7th- and 8th-grade groups reportedly liked most the "Search for Supersaurus" story and least the picture on page two, but the teacher for the older students noted that although the picture confused most, it was humorous to some. The 5th- and 6th-grade class was described as liking best the "Backyard Dinosaurs?" story and disliking nothing. All three teachers also perceived their students as having learned while enjoying the process. The teacher for the youngest group reported that they "learned how to preserve fossils, and they did their own experiments with chicken bones and mud." The teacher for the oldest group noted that the students "identified details as facts, reason and fantasy with examples as well as doing argumentative and descriptive paragraphs."

The English edition of Ranger Rick reportedly was not available in this school and none of the teachers had read it before. They all perceived the present Spanish edition of Ranger Rick as "somewhat different" from their students' usual materials because "one can see clearly a picture of what we're discussing," it has "more special information," and the "comparison and contrast in the process is very interesting." Only the Bilingual Coordinator indicated there was some similar Spanish material in the school--"World Newsmap of the Week."

Given their favorable experience with the magazine and the general lack of similar materials, all three teachers strongly recommended its continued use in a variety of grades and subject areas. The 4th- and 5th-grade teacher recommended it for future use in Language Arts in grades 3 through 5, in Science in grades 4 and 5, and in Spanish in grades 2 through 6. The teacher for the combined 5th and 6th grade recommended it for Language Arts and Science from kindergarten through 8th grade, and the Bilingual Coordinator recommended it for 4th through 8th grade in Language Arts, Science, and Spanish.

In discussing its educational value, one teacher stated, "Wonderful! Not only do the students learn, they enjoy themselves in the process." In commenting on its value for a bilingual program, they said, "A big help for reading and vocabulary"; "I think it would be a wonderful idea"; and "It is very helpful to state a topic or subject, stating the purpose in sentence forms and recasting them." The Bilingual Coordinator also indicated its potential use in ESL programs. "It has good motivation to discover meanings." He/she also stated that an additional value was that (the magazine) "encouraged the use of dictionaries by abundant scientific vocabulary for elementary students." This teacher also commented, "It permits an etymological study that adds understanding to the way words acquire meanings. Your stories are fascinating behind the word usage, coming from a variate sort of experiences."

Two schools had four classes participating in the study. The one school had two 4th grades, one combined 4th and 5th grade, and a combined 5th and 6th grade. At least 86% of the students in each class were Hispanic, spoke Spanish in their homes, and were enrolled in a bilingual program. With the exception of the students in the combined 5th- and 6th-grade class, who were described as newcomers to the country and were rated as speaking Spanish "pretty well," almost all the students reportedly spoke Spanish "very well." In the one 4th-grade class, 56% to 70% of the students were described as reading and writing Spanish "pretty well," whereas the other 4th-grade class reportedly could do so only "somewhat." The majority of students in the combined 4th- and 5th-grade class were rated as reading and writing Spanish "very well" (70% and 60%, respectively), with the remainder doing so "pretty well." The combined 5th- and 6th-grade class was described as performing these skills "pretty well." The English skills for this school sample, however, were markedly lower. Students in the one 4th grade were rated as speaking, reading, and writing English "somewhat"; 75% of those in the other 4th-grade class were described as speaking English "somewhat," but the teacher did not know their English reading and writing competencies. Most of the students in the combined 4th- and 5th-grade bilingual class were described as speaking, reading, and writing English "hardly at all" (90%, 70%, and 60%, respectively), with 1% performing these skills "very well," and the remainder only "somewhat." The students in the combined 5th and 6th grade were rated as speaking, reading, and writing English "somewhat."

As will be discovered in the following paragraphs, despite these differences in students' Spanish and English competencies and the different ways each teacher used the magazine, both teachers and students found the magazine educational and enjoyable.

The two 4th-grade classes used the magazine during a Science class for 61 to 75 minutes. The one teacher used four articles, whereas the other one used a different story, "The Green Velvet Princess," because they were currently studying butterflies and other insects. Neither teacher read to the students nor translated any of the Spanish. The combined 4th and 5th grade used the magazine during Reading and Science for 30 to 45 minutes. The teacher read the hedgehogs story at the students' request and translated a few words. In the combined 5th- and 6th-grade class, Ranger Rick was used during a Spanish period for 46 to 60 minutes; the teacher read the "Ranger Rick and His Friends" story, but did not translate any of the Spanish. Only one teacher used the Activity Guide, the section on "World Without Condors," but did not find it helpful. He/she suggested that simpler activities such as games and drawings be included as well as definitions or a clear picture of whatever is described.

All of the teachers reported liking the magazine, and all listed the photographs as one of the features liked most. Three of the four also referred to the stories, and one commented, "Ease of reading, appropriateness of materials, themes children like, and fantastic pictures." In responding to what they liked least, one teacher said he/she "liked it all," two did not comment, and one replied that most activities did not apply to bilingual inner-city children. The only suggested change in the magazine was the addition of some exercises or questions related to different topics. In discussing the various features, one 4th-grade teacher rated all as "very appropriate," and, with the exception of the vocabulary which was rated as "appropriate," so did the other 4th-grade teacher. Although the story topics and pictures also were rated as "very appropriate" by the teacher for the combined 4th- and 5th-grade class, he/she rated the games as "appropriate" and the vocabulary as "somewhat inappropriate." For the new arrivals in the 5th- and 6th-grade group, both the vocabulary and games were considered "somewhat inappropriate" and the topics and games as "appropriate." Of course, the extent to which such ratings reflect differences in students' abilities and interests, and/or in teachers' preferences, rating standards and interpretations, and so forth, is unknown.

According to the teachers, with the exception of the newcomers' class, their students also enjoyed the magazine and were actively engaged during its use. Students in all the classes were described as liking most the pictures. The 4th graders, in particular, were described as follows: "Very excited, talking about how beautiful the pictures were"; and "They loved the pictures, games, and some stories. I could see and hear them discussing what they saw in the pictures." Although for the three younger groups there was nothing that their teachers perceived them not liking, the teacher of the 5th- and 6th-grade group indicated the vocabulary was too difficult ("It took a long class discussion for them to understand what they were reading about"). Nevertheless, for this class as well as two of the others, the teachers reported that their students had learned from the experience such facts as the butterfly cycle and how people had contributed to both the extinction and protection of condors; one teacher, however, commented that there had not been enough time to evaluate their learning.

The English edition of Ranger Rick reportedly was not available in the school, nor had any of the teachers read the magazine before. Three of the teachers rated the present issue as "very different" from the students' usual school materials because it provided "totally new information about animals they have heard about but never seen up close," in a "format more attractive, more interesting, with specific information provided in an easy way to understand and comprehend. Selections not too long to be boring--they were just right." "For example, 'Green Velvet Princess' is presented in a story. They could see all the changes in a butterfly in a story they really enjoy." The fourth teacher rated it as "somewhat different" and commented, "My students (the combined 5th- and 6th-grade group) have very little experience reading magazines or newspaper articles." All the teachers reported there were no similar Spanish materials available.

Given the difficulty the newcomers in the 5th- and 6th-grade class experienced using the magazine, their teacher did not know whether to recommend its continued use. The three other teachers, however, were enthusiastic in their recommendations: one for Language Arts, Science, and Spanish in grades 3 through 6; another for all three subjects in grades 5 and 6; and the third for Language Arts and Spanish in grades 2 and 3 and Science in grades 4 and 5. Two of the teachers commented on the educational value of a Spanish edition of Ranger Rick. "It could be a useful addition to the Science and Social Studies curriculum." "It's a marvelous magazine. The students were fascinated with the illustrations, the articles, and the stories. They all seemed very happy to have the opportunity to read in Spanish a magazine like Ranger Rick. It is an excellent source of information for children (and enjoyment)." They also noted its potential value for bilingual programs. "It has high potential to reinforce animal names (in high interest stories) used or referred to in English, Science, and/or Social Studies." "An excellent magazine that could be used for many of the areas of study in the bilingual classrooms (Science, Social Studies, Language Arts, Reading, etc.)."

The other school with four classes participating in the study included a 4th grade, a combined 4th and 5th grade, a 4th through 6th grade, and a 6th through 8th grade. No questionnaire was received for the oldest group, but at least 86% of the students in the other three classes were described as Hispanic and as enrolled in a bilingual program. At least 86% of those in the two youngest classes reportedly also spoke Spanish in their home; somewhat fewer (71% to 85%) did so in the combined 4th- through 6th-grade class. The 4th-grade students were rated as speaking, reading, and writing Spanish "pretty well" and as also speaking English "pretty well," but as reading and writing it only "somewhat." Eighty percent of the students in the combined 4th- and 5th-grade class were rated as speaking and reading Spanish "pretty well" and writing it "very well." Although 90% of them were described as speaking English "pretty well," only 60%

of them reportedly also could read and write English that well. In contrast, students in the combined 4th through 6th grade were rated as speaking Spanish "pretty well" and reading and writing it "hardly at all," but as speaking English "very well" and reading and writing it "pretty well." Although no specific information was provided for the combined 6th- through 8th-grade class, the fact that it included students enrolled in bilingual, ESL, and transitional programs suggests that there was considerable range in their Spanish and English language skills.

As the following description will indicate, although used in different ways and for different amounts of time in these classes, both students and teachers generally found this Spanish version of Ranger Rick an enjoyable and instructive experience.

Three of the classes (the 4th, combined 4th and 5th, and combined 6th, 7th, and 8th grade) used the magazine during Science. The 4th grade also used it during Language Arts, as did the combined 4th- through 6th-grade class. The 4th-grade teacher, who was both a bilingual teacher and program coordinator, spent 46 to 60 minutes using eight of the articles because "they fit into the curriculum." None of them were read or translated by the teacher, but the "Search for Supersaurus," "Happy Bee," and "Green Velvet Princess" stories were studied in class; the "Build a Boxosaurus" article was a weekend assignment; and "Nature Club News," "Ranger Rick's Rare Wonders," "Nature Did It First," and "Diatoms" became the Science lesson for the day. The teacher for the combined 4th- and 5th-grade class used the magazine for 30 to 45 minutes during a Science period. Five articles were selected in response to the students' interests, three of which were read by the teacher. He/she also translated a few of the words. The combined 4th- through 6th-grade class spent

61 to 75 minutes with the magazine during Language Arts. The teacher, a Bilingual Category C Pull-out teacher, read two of the four articles that were used--"Search for Supersaurus" and the hedgehogs stories. These stories were selected because "the students were attracted to the pictures and wanted to know more about it"; most of the Spanish, however, had to be translated. The first two teachers also used the Activity Guide; the one teacher specified using the section relevant to the "Search for Supersaurus" story and reported finding it helpful, but the other teacher did not elaborate further.

All three teachers said they liked the magazine. Two said they liked the pictures best ("very attractive and interesting"), and the third reported that what he/she liked best was that it was interesting to students. Only the 4th-grade teacher mentioned anything liked least. For this youngest group, he/she reported "The vocabulary at times was too advanced for students. Had to explain and define many concepts." Later he/she also commented, "The articles were too long for the attention span of my students." In rating the various magazine features, one teacher rated all as "appropriate"; the other two both viewed the vocabulary as difficult and "somewhat inappropriate," and the pictures as "very appropriate," but the teacher for the 4th- through 6th-grade group rated the games and story topics also as "very appropriate," whereas the 4th-grade teacher rated the story topics as "appropriate" and the games as "very inappropriate." Only one teacher, however, recommended any changes for future issues--the inclusion of articles about different cultures.

The three teachers all reported that their students were actively engaged during the magazine's use. In describing what their students liked most and least, the 4th-grade teacher replied, "They enjoyed 'Search for Supersaurus.' We had been studying about prehistoric animals so it tied in beautifully.

They also loved the ideas given for creating a Boxosaurus." Another teacher responded that the students liked the pictures best ("They went from page to page looking at the pictures."). The 4th-grade teacher stated the students liked least the "Backyard Dinosaurs?" story because "it seemed too technical in Spanish. The students asked too many questions and started to lose interest and became bored." For students in the combined 4th- and 5th- grade class, the teacher felt some of the pictures were "a bit grotesque." The teacher for the combined 4th- through 6th-grade class reported that since these students were unable to read the magazine, the only articles that appealed to them were those he/she read to them.

Although none of the teachers reported any further follow-up activities, they all perceived their students had learned from this brief exposure to a Spanish edition of Ranger Rick. Some of the evidence reported for these perceptions were that students looked through the encyclopedia to find more pictures dealing with prehistoric life and they were very eager to discuss trips to the museum in reference to the dinosaur article.

An English edition of Ranger Rick was not available in this school, and only one of the teachers had read it before (once in elementary school and had liked it a little). Two of the teachers viewed the Spanish version as "somewhat different" from the students' usual school materials. They commented: "It's more up-to-date. The pictures are very current, some of the textbooks used are outdated"; and "The material was more appealing than their texts." The third teacher rated the magazine as "very different" because "We don't do any Science lessons at all in this program" (the combined 4th-, 5th-, and 6th-grade class).

Given their generally positive reaction to the magazine and the fact that there were no similar Spanish materials available in the school, they all recommended it for future use in the elementary school. They differed somewhat, however, in the details of their recommendation. The Bilingual Coordinator recommended it be used in grades 3 through 8 in Language Arts, Science, and Spanish and commented, "At all levels it's perfect. We only tried the 4th grade." The teacher for the combined 4th- and 5th-grade class recommended it be used in 4th and 5th grade for Language Arts and in 5th grade for Science, whereas the teacher for the combined 6th- through 8th-grade group recommended it be used in grades 4 through 8 in both Language Arts and Science.

In commenting on the magazine's educational value, one teacher said, "The students enjoyed Ranger Rick very much and were very receptive of the materials. They and myself look forward to receiving it every month." Although the teacher for the combined 4th-, 5th-, and 6th-grade group liked the magazine, he/she noted, "It's an interesting and different avenue of teaching Science. For the particular group I have, it would be more helpful to have the English edition of the magazine." All three teachers perceived its potential usefulness for bilingual programs: "It makes a good Social Studies supplement as well as Science"; (It provides) "more vocabulary"; and "It would be most appropriate for category A and B students or C students who could read well in Spanish." One teacher also noted its potential value for students in the ESL program--"It will help introduce vocabulary to Level A language students."

As noted earlier, two schools had six groups participating in the study. In the one school the sample comprised two 4th grades, one 5th grade, a combined 5th and 6th grade, a combined 7th and 8th grade, and a combined 4th- through 8th-grade group. Several of these groups comprised a small subgroup of students who were given the magazine because they could read Spanish. The two 4th-grade groups were two such subgroups. Six students came from one 4th-grade regular

Reading class. Seventy-one percent to 85% of the students in this class were described as Hispanic and 56% to 70% of them reportedly spoke Spanish in their homes. Although 70% of them were rated as speaking Spanish "pretty well," the teacher was unable to rate their Spanish reading and writing skills. These students generally were more competent in English. Eighty percent of them were rated as speaking English "pretty well" and 20% "very well." All were described as reading and writing English "pretty well." Less than 25% of the students in this class were in a bilingual program. At least 86% of the students in the other 4th-grade class were Hispanic and spoke Spanish in their homes. All of them were described as speaking both Spanish and English "very well." Although the teacher felt unable to rate the students' Spanish reading and writing skills, he/she described them as reading and writing English "pretty well." None of the students in this class were in a special program and the nine students from this class who participated in the study did so as an extracurricular activity.

At least 86% of the students in the 5th-grade class also were Hispanic and spoke Spanish in their homes. Their teacher, however, did not know Spanish and was unable to rate their Spanish language skills. They reportedly could speak, read, and write English "pretty well." None of these students were in a bilingual program, and only four students in the class were sufficiently able to read Spanish to participate in the study. The combined 5th- and 6th-grade class also was a regular class. Seventy-one percent to 85% were Hispanic, although at least 86% were described as speaking Spanish in their homes. These students were rated as speaking and reading Spanish "pretty well," but the teacher was unable to rate their Spanish writing skills. In English, however, 98% were rated as speaking, reading, and writing it "pretty well" and 2% as performing these skills "somewhat." The magazine was given to 13 students (38% of the class) who the teacher perceived as the only ones able to read it. At least 86% of the combined 7th- and 8th-grade group also were Hispanic and spoke Spanish in their homes. The 27 participants were specially selected and taken out of their regular classes to participate in the study. All were rated as speaking and reading Spanish "very well." Ninety percent also could write Spanish "very well" and 10% "pretty well." All were described as speaking, reading, and writing English "pretty well." Five of the 27 students were in a transitional program. The 4th- through 8th-grade group was a bilingual class in which at least 86% of the students were Hispanic and spoke Spanish in their homes. Their teacher rated them as speaking, reading, and writing Spanish "pretty well" and English "somewhat."

Given the very diverse characteristics of the participating groups in this school it is not surprising that the magazine was used in a variety of ways. The six 4th-grade students spent 61 to 75 minutes during their Reading period to read various parts on their own that interested them. The teacher did not read nor translate any of the material. The nine participating 4th graders in the other class were self-selected, as they used it on their own during 46 to 60 minutes of "free reading" periods as well as at home as an extracurricular activity. The teacher did not translate any of the Spanish and did not know what parts of the magazine the students had used. The four students in the 5th-grade class who were given the magazine also used it on their own, but for at least 90 minutes. Since the teacher did not understand Spanish, he/she was unable to translate any of the words, but according to the students, all of the magazine was read. The thirteen students in the combined 5th- and 6th-grade class who were selected to receive the magazine used all of it independently for Reading and Social Studies homework. As noted earlier, specific 7th- and 8th-grade students were taken out of their regular Language Arts classes to participate in the study. These 27 students spent 46 to 60 minutes in another room reading 12 of the magazine sections on their own. None of the Spanish was translated for them. The 16 students in the combined 4th- through 8th-grade group spent two periods during their Spanish reading class on the "Backyard Dinosaurs?," "Sea Poems," "Happy Bee," and "Green Velvet Princess" stories. The students voted for these selections, and the teacher neither read any of the articles nor translated any of the Spanish. Given the fact that almost all of the students in this school used the magazine on their own, it is not surprising that none of the teachers used the Activity Guide.

Three of the teachers did not respond to what they liked most and least in the magazine since they did not read Spanish and/or felt the question was not applicable for them. The remaining three teachers said they liked best the high quality photography, the high interest value and good pictures, and the variation of topics. Only two teachers commented on what they liked least--the difficulty of some words and "not to have the magazine long enough for making an intelligent evaluation." In rating the various magazine features, one teacher said he/she was uncertain; two rated all of them as "appropriate"; one rated the pictures as "very appropriate" and the other features as "appropriate"; and both 4th-grade teachers rated the vocabulary and story topics as "somewhat inappropriate," the games as "appropriate and easily followed," and one rated the pictures as "appropriate," and the other as "excellent" and "very appropriate." None of the teachers suggested any changes for future issues.

All of the teachers reported that the participating students had been actively engaged in the magazine. Although one teacher said he/she did not know what the students had liked most or least, three teachers mentioned the pictures as liked most ("The colorful pictures led to cultural questions about nature"; "The pictures--they all mentioned it one way or another"; "The picture of the ugly hippopotamus. They couldn't decide what it was. The word was unfamiliar to some Spanish dialects. Mexicans thought the word referred to an octopus."). One of the 4th-grade teachers said the students liked most the games "because they flipped through the magazine and stopped there first." The other 4th-grade teacher reported that the students liked the information and activities on dinosaurs most, as evidenced by the fact that they motivated questions and discussion. Only two teachers mentioned anything their students liked least. The combined 7th- and 8th-grade group reportedly thought the stories were too long and one of the 4th-grade teachers said the students did not like some of the graphic animal pictures. Both 4th-grade teachers also reported further follow-up activities--adding the magazine to the class library, and reading it at home and discussing it with their families. The teacher for the 4th- through 8th-grade bilingual class commented that he/she planned to use it in the future. Moreover, the students in this class had decided to form a Nature Club.

When asked if they thought their students had learned anything from this brief exposure to Ranger Rick, three of the teachers said they did not know. All three had students who worked independently at school and/or home with the magazine. The remaining three teachers perceived that their students had learned, as evidenced by their questions and discussions in class, the fact that they "kept reading without picking their eyes up," and "their expressed desire to read more about dinosaurs."

Although a few teachers were uncertain, the majority stated the English edition of Ranger Rick was not available in the school. Also, only one of the teachers had seen it before (frequently at home and liked it a lot). Four of the teachers perceived the present Spanish issue of Ranger Rick as "somewhat different" from their students' usual school materials because it had "more detailed facts on animals," "a wider range of information," and because of "presentation, colorful, realistic, titles, interesting." Another said it was "very different" because of the curriculum, but did not elaborate further; the sixth teacher said he/she did not know. Most of the teachers stated they did not know if there were similar Spanish materials in the school, but the bilingual teacher said there were none.

Thus, given the generally favorable response they and their students had to the magazine, with the exception of the one teacher who did not read Spanish and therefore felt unable to make a recommendation, the teachers recommended its continued use in their school. They varied, however, in the grade levels and subject areas suggested. The recommendations were as follows: library use for kindergarten through 8th grade; kindergarten through 8th-grade Spanish and grades 1 through 8 in Language Arts and Science; Language Arts and Science for grades 3 through 8; grades 4 through 8 in Language Arts; and 5th- and 6th-grade Language Arts as well as ESL and bilingual programs. In commenting on its educational value, those teachers who responded said: "The magazine has high interest level"; "None except that it allows them to keep the skill of reading Spanish. I do not think they would have read all of the magazine if it had not been in Spanish"; and "My students enjoyed the reading of it very much. I think that will motivate them to do some outside the classroom reading." When asked what potential a Spanish edition of Ranger Rick might have for bilingual, ESL, or other special programs, the teacher with only four students able to read Spanish said, "None in a bilingual program." The other teachers thought differently, however. They commented: "The publication seems highly useful in bilingual or ESL programs"; "Great potential"; "My students liked the magazine. Perhaps since they are not in a bilingual room they could use it in the library"; and "It is a good supplementary reader." The bilingual teacher commented further on completing the questionnaire, "My students enjoyed the reading. They all want to continue using a similar magazine for reading. Pictures and colors are very attractive."

The other school had a very different set of six classes: a combined 3rd and 4th grade, a combined 3rd through 5th grade, a 4th grade, a combined 4th and 5th grade, and a combined 5th and 6th grade. In all classes at least 86% of the students were described as Hispanic and as speaking Spanish in their homes. The students varied considerably, however, in their competencies in Spanish and English. Eighty percent of the students in the combined 3rd and 4th grade were rated as speaking, reading, and writing Spanish "somewhat," and 10% each as "pretty well" or "hardly at all." Seventy percent of them were rated as speaking, reading, and writing English "somewhat," and 30% "pretty well." As evaluated by the Bilingual Reading teacher, 80% of the students in the combined 3rd- through 5th-grade class were rated as speaking Spanish "very well" and 15% "somewhat"; the comparable percentages for reading and writing were 70% and 15% and 50% and 20%, respectively. They were considerably less proficient in English as 65% were rated as speaking, reading, and writing English "hardly at all," (45%) or only "somewhat" (25%). The 4th-grade students were described as speaking Spanish "pretty well," reading it "hardly at all," and writing it "somewhat"; they were rated as speaking, reading, and writing English only "somewhat." Students in the combined 4th and 5th grade were rated as speaking and reading Spanish "pretty well" and writing it "somewhat", and as also speaking English "pretty well"; they were not rated on their English reading and writing skills. Seventy-five percent of the students in the combined 5th- and 6th-grade class were rated as speaking Spanish "very well" and 25% as "pretty well"; the comparable percentages for reading and writing Spanish were 50% each, and 25% and 50%, respectively. They also were generally proficient in English, as 75% were described as speaking, reading, and writing it "very well", and 25% only "somewhat." Students in the combined 4th through 6th grade were rated as speaking and writing Spanish "somewhat" and reading it "pretty well", but as speaking English "pretty well" and reading and writing it "somewhat." All were bilingual classes; two also served ESL or transitional students.

Despite these differences in the students' Spanish and English language skills and differences in the application of the magazine as will be described below, the following findings indicate that this initial experience with a Spanish edition of Ranger Rick was an enjoyable learning experience.

The combined 3rd- and 4th-grade class spent 30 to 45 minutes during their Language Arts and Science period on the three dinosaur articles and the "Sea Poems." The teacher did not read any of the articles, but he/she reportedly translated half of the words. The 4th graders in the combined 3rd- through 5th-grade class spent more than 90 minutes during Science. The teacher read the three dinosaur articles since they had been discussing animals and had spent special time focused on the idea of extinction. Although reportedly he/she did not translate the Spanish, time was spent prior to reading explaining (in Spanish) about half of the words. The 4th- and 5th-grade students from this group also used the magazine for more than 90 minutes in Spanish Language Arts with the Bilingual Reading teacher. During this class period, 11 of the articles were used, but the teacher did not read any of them and translated only a few words. The 4th-grade class spent 46 to 60 minutes during Social Studies and Language Arts on five of the articles, one of which ("Piper Grows Up") the teacher read. The teacher did, however, translate half of the words. The teacher for the combined 4th and 5th grade selected four articles during Science period that he/she felt were easily intelligible for the children and read one of them ("Ollie Otter's Fun Pages") as well as translating a few words. The students were then free to read other parts that interested them on their own. Eight of the articles were used in the combined 4th- through 6th-grade group over a 90-minute period during their Spanish class. The particular articles chosen were selected because they looked appealing to the students. None of the articles were read to the students nor was any of the Spanish translated. The combined 5th- and 6th-grade class spent more than 90 minutes with five articles in the magazine during Science and Spanish. The teacher read all five of them to the students, but only translated a few of the words. Only one teacher used the Guide, given the limited time available, but that teacher found it helpful and suggested it also be in color.

Although one teacher did not respond to the question, the remaining teachers all expressed their pleasure with the magazine. Two of the teachers said they liked most the colorful pictures; two mentioned the illustrations and articles; one responded, "the illustrations, puzzles, and 'Rare Wonders'"; and another said, "concise, interesting, very picturesque, succinct is it!" When asked what they liked least, two responded "none" ("all interesting"); three mentioned the need for easier vocabulary; and one listed the puzzles. In rating the various magazine features, all rated the pictures as "very appropriate"; the story topics were rated as "appropriate" by all but one who rated it as "very appropriate"; the games were rated by two teachers each as "very appropriate," "appropriate" and "somewhat inappropriate"; and the vocabulary was rated as "appropriate" by three teachers, "somewhat inappropriate" by the combined 3rd- and 4th-grade and the 4th- through 6th-grade teachers, and "very appropriate" by the 4th-grade teacher. Only two teachers recommended changes for future issues: inclusion of a glossary of technical terms and deletion of English names in a Spanish text because "they are hard to pronounce and meaningless and slow down reading (e.g., 'Ollie Otter' is ohgee ay ohter)."

All the teachers described their students as actively engaged when the magazine was used. In describing what their students appeared to like most, two referred to the pictures ("the beauty and realism"), one to the new information, another to the animal articles, and one responded, "All, especially the dinosaurs and hedgehogs." When asked what the students liked least, three teachers did not respond or said "nothing"; two referred to the picture of the hippopotamus; and one commented that "Dear Ranger Rick" interested only the better achievers. The Science teacher said that at first students disliked the terminology of technical terms, "but once we went through them, liked it. It was good for all of us." As additional evidence of their students' engagement, some teachers reported that students took the magazine home and shared it with their families and/or did various follow-up activities such as making a dinosaur model, drawings, and discussing their next visit to the museum. Two teachers noted that they, too, used the magazine further and/or shared it with their families.

The teachers not only perceived their students as having enjoyed the magazine, but also as having learned from the experience. Included in the evidence to support their views were the students' recall of story facts, newly acquired knowledge about different kinds of animals, and the fact that many children had taken out library books to study more about dinosaurs.

One teacher reported the English edition of *Ranger Rick* was in the library, but the others said "no" or "don't know." None of them, however, had read it. Only one teacher knew of any similar Spanish materials in the school--*Luis Rey Ciencias*. Three teachers perceived the present Spanish edition of *Ranger Rick* as "somewhat different" from their students' usual school materials because it was "current, limited topic area, can be handled without fear of damaging" and "when I presented dinosaurs as a possible extinct animal I did not have first-hand experience of what was related to us in 'Search for Supersaurus' and, too, the pictures were marvelous." Two teachers viewed the magazine as "very different" ("It provides specific information about new topics or [ones] they didn't remember."); however, one teacher said it was "not at all different," but provided no rationale for this rating.

Given the generally favorable response by teachers and students to the magazine and the limited availability of similar materials, the teachers recommended that the magazine be continued in their school across several grade levels and subject areas. Two teachers recommended it be used in 4th grade in Science and Social Studies, with one teacher also adding Language Arts, Spanish, and Fine Arts; two recommended it be used in grades 4 through 6 in Language Arts, Science, and Spanish; one recommended it be used in grades 4 and 5 for Science and Spanish; and another recommended it be used in grades 4 through 8 for Language Arts and Science.

The teachers' comments on the magazine's educational value express best their reactions to the magazine [illegible] "Very favorable. All children liked it. New fresh material profusely illustrated." "The educational value is great for Social Studies and Science." "It's a useful supplement to Spanish reading and Science program." "It's a good edition and it's a help in the development of the Science class." "Affords them the educational information that is both professionally done and interesting for their ages. Especially in discussing the materials! They are so knowledgeable and can express themselves ever so much better in Spanish than in English." With the exception of the teacher for the combined 3rd and 4th grade, they also agreed that it had potential value for use in bilingual, ESL, or other special instructional programs. "Very useful for Science in bilingual rooms." "As a supplement to Science and Social Studies materials." "Definitely. In Reading, Language Arts, in Science, and Social Studies. If other editions are as informative, I'm all for it!" "I think it is a good magazine that can provide additional educational material to the student." Also, one teacher later commented, "It is difficult to find interesting and educational fun materials in Spanish unless one goes out of the country."

In this large midwestern city, the special Spanish edition of Ranger Rick was enthusiastically received by a large diverse sample of Hispanic youth, predominantly of Puerto Rican origin, and their teachers. Both school administrative and teaching staff generally perceived the content as appropriate and both they and their students found the experience very enjoyable and informative--not only teaching the students many things they did not know but motivating them to want to learn more.

New Jersey

Union City. The coordinator for the Bilingual and ESL programs for the Union City Public Schools reviewed the study with school administrative and bilingual teaching staff. Three schools in this urban site adjacent to New

York City participated in the Ranger Rick Study. Although demographic data for the individual schools were not provided, 83% of the 7,700 students in the Union City schools were reported to be Hispanic (predominantly Cuban), and approximately 60% of the students were described as coming from families whose parents were unemployed or working as unskilled laborers. Students in these schools were described as performing, on the average, at one or more grade levels below their expected grade level on standardized reading achievement tests. With the exception of a few ESL students, all the participating students attended bilingual classes. The three schools provided eight classes: one a combined 7th- and 8th-grade group; another a 4th-, 5th-, and 6th-grade class; and the third, a 4th-, 5th-, 7th-, and a combined 6th- and 7th-grade class. Class sizes ranged from 14 to 20.

From the eight study classes, 141 students responded to the Student Questionnaire. Of these, only 36 (26%) were in the 7th or 8th grade, and the majority (57%) were male. Only eight students (6%) reported previously reading the English edition of Ranger Rick magazine; most had read it at home for five or more times and enjoyed it. Ninety-nine percent said they spoke Spanish at home. Forty-five percent each stated they read Spanish "pretty well" or "very well"; none reported not reading it at all. Examination of the grade level data indicated that the youngest students had the highest percentage (75%) who said they read "very well." Overall, 90% said they thought the Spanish in the magazine was "easy", but this ranged across classes from 69% to 97%, with the older students reporting the most difficulty.

Slightly more than half of the students (55%) reported that the teacher read the articles to them, although for the four classes in one school he/she did not. Only 20%, however, said the teacher translated any of the Spanish.

With the exception of two students, this occurred in only one 5th- and one 4th-grade class, and for most students only a few words were involved. When asked if they had participated in further magazine-related activities following the class period devoted to its use, 70% of them reported doing something in school. The most frequent responses were using the "Build a Boxosaurus," "Happy Bee," and "Ranger Rick and His Friends" articles (21%, 14%, and 12%, respectively) and drawing or building a dinosaur model (24% and 22%, respectively). Other less frequent responses were studying the animals more (8%) and writing a composition (6%). Responses differed within and across schools, however. The "Build a Boxosaurus" article was mentioned by the 4th- and 5th-grade students in one school, and 18 of the 20 students who referred to the "Happy Bee" story were in the combined 6th- and 7th-grade class. Also, doing further research and writing compositions were only mentioned by students in the 6th grade and above.

Only 37% (mostly 4th graders) said they did something outside of school. Few of the 4th graders specified what they did. "Ranger Rick and His Friends" and the "Happy Bee" stories were listed most (by 10% and 7%, respectively, of the total sample), primarily due to the combined 7th- and 8th-grade and combined 6th- and 7th-grade students. Again, drawing was mentioned most (by 11% of the total sample), and then further research (7%) and reading (6%). Some of the oldest students mentioned studying other animals in danger of extinction such as whales and the North American eagle. Fifty-four percent said they discussed the magazine with their friends or family (again, mostly the 4th-grade students as well as one combined 7th- and 8th-grade class). The dinosaur story, "Ranger Rick and His Friends," and "Search for Supersaurus" were mentioned most (by 15%, 12%, and 9%, respectively, of the total sample).

When asked what they had learned from the magazine, 40% of the total sample reported various story facts; the next most frequent responses were story titles or topics (24%), and learning about nature and animals (8%) and conservation issues (7%). In general, the younger 4th-grade students listed general topics only, whereas the older students stated many different specific facts (e.g., about the condors). In addition, ten students in the 7th- and 8th-grade class mentioned a recognized need for conservation and discussed the solar energy article. One student also commented, "I liked the magazine because it's in Spanish and one learns better in the language he speaks."

Students at all grade levels stated they liked the pictures best (18% of the total sample). The next most frequently mentioned favorite articles or features were the dinosaur story (13%), the stories in general (12%), and the animals (10%). Other preferences listed by 6% or more of the sample included the variety and "Happy Bee" story (9% each), the hedgehogs article and the "Sea Poems" (7% each), and the "Ranger Rick and His Friends" story and "April Foolers" (6% each). Many students referred to a variety of features such as exemplified in the following quote: "What I liked most was its illustrations, its vocabulary development and its color, and that it is in Spanish because there are no science magazines in Spanish." Classes varied, however, both in the ranking and range of responses given. For example, the older students mentioned more often that what they liked most about the magazine was that it was interesting, provided important information, and also taught through pictures. Many fewer students mentioned anything liked least. All the 6th-grade students said they liked "everything." In describing what they liked least, the "April Foolers" feature was mentioned most (by 26% of the total sample). The hedgehogs story was the second most frequent response (12%). No other article or feature was mentioned by more than 5% of the sample. In rating the various magazine features, the majority of students said they liked them all. Only 17 "dislike" ratings were given. Although the 7th- and 8th-grade students said they liked all the magazine features approximately equally well, the younger students were primarily responsible for the overall range in the percentage of "like" responses (i.e., 68% for variety to 80% and 81% for the stories and vocabulary, respectively). The percentage of students who said they liked the pictures and games were 78% and 74%, respectively.

In comparing this issue of Ranger Rick with their other school materials, the most frequent differences noted were that the magazine was more interesting and enjoyable (28%), had more (and colorful) pictures (16%), and was in Spanish (10%). Other less frequent differences mentioned were the variety and ease of understanding (7% each), that it was more enjoyable and better made (5%) and had different stories (5%). Some of the comments were as follows: "Our books don't have as many pictures and such good Spanish as the one you showed us"; "It's different because it has different variety, isn't boring, and it's easy to read"; "It is different because it has many pictures, the paper is better, its colors are pretty, and it is easy to understand"; "That it's very interesting. There are easy topics that interest my parents"; and "It deals with antique things in a modern way."

Consistent with the previously reported findings, almost all the students (96%) said they wanted to continue using the Ranger Rick magazine. Half of the students said they preferred to have the magazine in Spanish, 35% said they would like to have it in both Spanish and English, and only 5% expressed a preference for an English edition only. There were no apparent age or school trends. Overall, 66% responded that they wanted to use it in school and 56% in the home. Some students explained their choice of location: "In school because I can ask my teachers if I don't understand"; and "At home because there's more tranquility and calm." Almost all of the students in the combined 6th- and 7th-grade class (who were described by their teacher as new entrants into the country) said they preferred to use the magazine at home. The two other classes with (slightly) more students preferring to use it at home were from the same school.

Only ten students (7%) stated they would like any changes in the magazine, but when asked to be specific, four gave only the name of a specific article (e.g., "Backyard Dinosaurs?"), two mentioned the hippopotamus picture, and one the drawings. One student responded, "Make it bigger!" When asked to recommend the grade levels in which the Ranger Rick magazine should be used, students usually selected their own grade level most. Overall, the grade levels students checked most were the 5th, 4th, and 6th, in that order (by 64%, 59%, and 55%, respectively, of the total sample).

At least several students in every class wrote additional comments after completing the questionnaire. Most reiterated how much they had enjoyed the magazine and wanted to continue receiving it. Some examples from different classes include the following: "I used it as an important book and I learned many things from it.... Well, the whole magazine is good. I like it because it is entertaining and through that one learns something"; "My comment about the Ranger Rick magazine is that it's very beautiful and contains interesting things that call attention to everything. Also for its photographs, its paper, the stories, and I would like to continue receiving it because it interests me a lot and I wish to continue reading it"; "Because it teaches us different things such as how to make a boxosaurus and it also teaches us to love animals and to not treat them badly but to become their friends"; "I would like to know more science through this magazine"; "What I think about the magazine is that it is very interesting because one's self can learn something about such animals. Furthermore, experiments could be done using all the facts in the readings. It is also good because it has activities that entertain. It is interesting and good since we can know the various animals that existed millions of years ago. We can also know stories, etc."; "The authors of this magazine have studied a lot"; "I have used the magazine in the best way possible. I showed it at home and my parents became interested in it"; "I like the magazine a lot because it brings very interesting stories like solar energy and also we learned a lot, us students and teacher. I thank you very much because the questions in the questionnaires will help how I am in school"; and "Congratulations for such a pretty magazine!"

Teachers from seven of the eight participating classes completed the Teacher Questionnaire. All indicated that almost all the students were Hispanic and spoke Spanish at home. Most of the students were described as speaking Spanish "very well" and reading and writing it at least "pretty well." Teachers in several classes noted that 50% spoke English "hardly at all" and 70% could read and write it "hardly at all." The combined 6th- and 7th-grade class was comprised of newly arrived Hispanic immigrants, almost all of whom were described as speaking, reading, and writing Spanish "pretty well" (95%, 90%, and 85%, respectively), but as speaking, reading, and writing English "hardly at all."

Except for one Spanish class, the magazine had been used during the Science period. (One teacher had also used it with the same students during a Social Studies and Reading period.) Teachers differed in the length of time devoted to using the magazine, but all but two used it for at least two class periods. They also differed in the number and nature of articles used (from one to all). Most said they chose articles relevant to their particular curriculum. Since most were Science classes, this led to using the "Search for Supersauraus" article in two classes and "Green Velvet Princess," "Happy Bee," and "Ranger Rick and His Friends" in one class each. One teacher noted they were currently studying animals in danger of extinction as part of the curriculum and thus the "Ranger Rick and His Friends" story was particularly relevant. Several teachers noted, however, that the students read other articles in the magazine at home or that they used other sections in other class periods (e.g., using the poems for creative writing and "Dear Ranger Rick" for practicing writing letters). Except for a few words, none of the teachers translated the Spanish. Only two teachers reported using the Activity Guide, although one said he/she would have used it if the class had not recently completed several varied activities on a similar topic. The teacher for the combined 7th- and 8th-grade class indicated he/she had used the Guide for an individual research project and also for Endangered Species Day, and one of the 4th-grade teachers had used "Fossil Fun."

All the teachers were very positive in their response to the magazine. All rated the various magazine features as "appropriate" or "very appropriate" (the latter especially indicated with regard to the photographs). Several teachers stated that what they liked best was the variety of topics and the pleasant way they were presented. One teacher responded that what he/she liked best was the Spanish ("their language") and another referred to the well-prepared objectives and excellent photos. Only one teacher (with 4th-grade students) reported that some of the topics were difficult for the students' reading level. That same teacher, however, rated the vocabulary as "appropriate." One teacher for the combined 7th-and 8th-grade group, although liking very much the present variety, suggested there be more stories for 12- to 15-year-olds.

All the teachers also reported that their students were actively engaged while the magazine was presented, and that they especially liked the pictures as well as enjoying the stories and games. Most of them (as well as the teachers) reportedly took the magazine home to read more. As one teacher stated, "They were impressed to find a magazine in Spanish and very impressed with the photos." Few indicated anything their students liked least; those that did referred to the hippopotamus and/or hedgehog pictures. They all also perceived that their students had learned from the experience as evidenced, for example, by the projects done during and outside school, the questions posed in class discussions, and their desire for further learning.

When asked if and how the magazine was different from the students' regular school materials, teachers varied in their responses. Two said it was "not different at all"; four said it was "somewhat different," but for different reasons ("since it was in Spanish, they could read it"; "vocabulary easier"; "additional and more up-to-date information provided"); and one said it was "very different" because it was "much more attractive."

With the exception of one teacher who said "don't know," they reported that there were no similar Spanish materials currently in their schools. Most did not know if the English version of Ranger Rick was available, and only one had previously read it (and liked it a lot). Given the need, however, for appropriate Spanish materials and their enthusiastic response to this Spanish edition of Ranger Rick, they all recommended the magazine's continued use. Five teachers recommended the Spanish edition only for their grade level in Language Arts and Science classes, but two recommended that it also be used in Spanish, and one in Social Studies; two teachers recommended it be used in grades 4 through 8 in Language Arts, Science, and Spanish.

The most important information, however, is provided in their comments concerning the educational value and potential of a Spanish edition of Ranger Rick for bilingual, ESL, or other special instructional programs. As to its educational value, one teacher responded that it was an excellent supplement to the science curriculum: "Its clear-cut approach leads to effective learning, and by including the latest research it increases the students' interests." Two other teachers also stated that the magazine not only reinforces well scientific knowledge, but is useful as an introductory activity ("It brings about children's curiosity for a given subject"). In noting its potential for bilingual programs, one teacher commented how difficult it was to find Science current events in Spanish, especially regarding endangered species: "Since a major concern in Spain and Latin America is feeding their populations, the concept of preserving animals is unfamiliar and not taught." The teachers also responded that it was good reinforcement for Spanish, while at the same time being excellent reading material in Science; one teacher expressed his/her pleasure that since the magazine was in Spanish the students had something worthwhile they could read. The value for ESL classes was also indicated, since "the many photos would aid word recognition." One teacher, however, indicated a preference for having the magazine available in both English and Spanish so as to be more useful for both ESL and Spanish classes.

In summary, these teachers found the magazine instructive, interesting, pleasant, and "unusual to find so well-written in Spanish." Although one 5th-grade teacher wanted the vocabulary scaled down to enhance comprehension, and several mentioned the specific hippopotamus and hedgehog pictures as interfering with the students' interest in reading these articles, in general, these teachers found the magazine highly appropriate for these inner-city Hispanic youth and filling a need presently not being met. The following quote from a teacher who used the magazine not only during Science, but also during Social Studies and Reading periods summarizes well these teachers' reactions: "I really enjoyed it. I am delighted with the edition of Ranger Rick magazine. It is the first time that we have something like this in Spanish. The material is very colorful and beautiful. We hope it will continue."

The Coordinator for the Bilingual and ESL programs in the Union City schools arranged for me to attend one of the periodic afternoon meetings he held with the teachers in the bilingual program since this would provide an opportunity to meet all the 4th- through 8th-grade bilingual teachers who were participating in the Spanish Ranger Rick Study in one location. The meeting that day was held in one of the three schools in Union City participating in the study. The school is located only a few blocks from the central business district.

Prior to the meeting, I had a brief friendly chat with Mr. ______. After introducing me to the staff associate who was to conduct the meeting with the 3rd- through 8th-grade teachers, he left to meet with the first- and second-grade teachers who were located in an adjacent classroom. Following the scheduled agenda, I was introduced to the group. There were 11 teachers in attendance, a diverse group whose age appeared to range from the twenties to the late fifties.

Two were males and, with the exception of one teacher of Italian background, all were Hispanic and predominantly Cuban. All eight classes participating in the study were represented; the three remaining teachers taught third grade. (It is interesting to note that the two bilingual program teachers who refused to participate in the study also did not attend this meeting.)

After briefly reviewing the purpose of the study, I opened up the meeting to general comments. The group was extremely favorable in their responses. The teachers praised the quality of the magazine, not only in its content, but in its physical features such as the print and paper used. Several noted the excellence of the Spanish translation, which they reported was in marked contrast to most Spanish materials currently being used in the schools. One teacher criticized the adequacy of the poetry translation, but, as the other teachers noted, it is very difficult to adequately translate poems and rhyming is often sacrificed.

Most teachers mentioned using the magazine for more than one class period and in two instances, in two different subject areas, Language Arts and Science. Some teachers were still using it. In several classrooms, the stories had led to individual or class projects such as constructing dinosaur models, writing book reports, and making illustrations in various art media. When asked about the appropriateness of the vocabulary used, the comments again were generally highly favorable. Both the 4th-grade and 8th-grade teachers responded that the vocabulary was "neither too easy nor too difficult." Only one teacher, who also had 3rd-grade students in her classroom, reported some difficulty with the vocabulary.

The teachers also reported how enthusiastic their students had been about the magazine. All of them commented on how much the students had enjoyed the various story topics, particularly the story about dinosaurs, and the photographs. Although some 8th-grade students reportedly had said they thought some of the stories were too childish, their overall reaction to the magazine remained very positive. In discussing the various stories in the issue, one teacher commented how affected the students were in learning about the need to save animals, and how several students reported trying to explain to their parents how important this was. This same teacher noted that this was a very "American" concern, unfamiliar to many Hispanic families. For example, in Latin American countries where poverty is great, she felt the emphasis in texts would be on using animals for food, not on saving them. Thus, this was a very new concept to many students and their families, and, in her opinion, an important one for them to learn.

Throughout our lively and friendly conversation, numerous instances were given of the students' delight with the magazine. Several students had requested information on subscribing to the magazine. (When asked, the teachers did not know if an English version was available in their school library.) Many students kept the magazine in their desks to read. One teacher laughingly described having to reprimand a student for "sneaking" reading the magazine during another class period. As the teachers departed, they expressed the hope that this experience meant the Union City Board of Education would approve obtaining more issues. They emphasized how great the need was for up-to-date and varied Spanish materials.

After the teachers left, I discussed the magazine with Mr. __________ and his associate. Both reiterated the teachers' favorable comments. They praised the magazine's content and the quality of the translation, and they thought the vocabulary was appropriate for the students in their program.

Although the majority of students in the Union City schools are of Cuban background, only 40% of those in the bilingual program are Cuban. The remainder are from a variety of Hispanic cultures. Despite this diversity of students and teachers, this Spanish issue was perceived as a very useful tool in achieving their educational objectives.

Thus, findings from both the questionnaires and the site visit indicated that for these inner-city Hispanic youth, many of them new arrivals to the country, a Spanish edition of Ranger Rick was not only greatly enjoyed by both students and school personnel, but served a considerable need for appropriate Science materials.

Vineland. After reviewing and approving the study, the Assistant Superintendent of Elementary Education for the Vineland Public Schools arranged for the participation of a diverse array of classes serving Hispanic youth in this southern New Jersey rural area. Vineland has a sizable Puerto Rican population. Many families had originally migrated to this area for farm jobs, but then settled in the community. Two Vineland schools participated, one serving grades 1 through 4 with 42.5% of the 458 students Hispanic, and the other serving grades 5 through 8, with 32.7% of the 682 students Hispanic. Fifty-five percent of the students in both schools were described as coming from families where the household head was employed as an unskilled laborer or unemployed. Students in these schools reportedly generally performed at grade level on standardized reading achievement tests.

The 77 students who responded to the Student Questionnaire came from five classes; two classes were in the elementary school (a combined 3rd- and 4th- and a 4th-grade class) and three in the middle school (a 5th,- 6th,- and a combined 7th- and 8th-grade class). Included among these classes were two bilingual classes (the combined 3rd- and 4th-grade and the combined 7th- and 8th-grade). Of these 77 students, 61 were in grades 4 through 6 and 16 in grades 7 and 8; 58% of them were female, with no class having more males. Twenty-three (30%) of the students had read the English version of Ranger Rick, but only one of these was in the oldest class. Approximately half of these students had read it at home, most of them only once, and most of them said that they had enjoyed it.

Seventy-three percent of the students reported speaking Spanish at home, but 57% said they only could read it "a little bit" (32%) or "not at all" (25%). In the one 4th-grade class, none of the 20 students reported speaking Spanish at home, and 15 of them said they could not read it at all; the remaining five replied they could read it "only a little bit." In the remaining classes, all but one student spoke Spanish at home and only four reported not reading it at all. Similarly, although 14% of the total sample indicated the Spanish in the magazine was "difficult," and 32% said it was "neither difficult nor easy," 10 of the 20 4th graders chose the English version of the questionnaire, and of the ten who used the Spanish version, four stated it was "difficult." Although overall 51% and 64% of the students reported that the teacher read and translated the magazine, respectively, this was only true of the lower elementary school. For the 4th-grade class in which no one spoke Spanish and few said they could read it at all, the teacher reportedly translated everything; in other classes he/she only translated a few words.

With the exception of three students, only the combined 7th- and 8th-grade bilingual class reported doing further magazine-related activities in or out of school (23% and 19%, respectively, of the total sample). These students wrote reports on what they had read and liked; all chose to write about the dinosaur article. The other three students built the carton dinosaur, drew a model, experimented with plants, and/or did some of the puzzles.

Slightly over half of the students (39 or 51%) said they had discussed the magazine with their family or friends; 27 of these 39 were in the youngest class, and they all responded that they discussed "animals." The most frequent response from the other students were references to the dinosaurs. It should be noted, however, that students in the 4th-grade non-Spanish speaking class did not respond to this question nor to the following items 10 through 14. In describing what they had learned, the few responding mostly listed article titles; only seven students provided specific story facts.

"Animals" was the topic listed most frequently as liked best (20% of the total sample, with 18 of the 20 choices coming from the youngest class), followed by the pictures (12%) and stories (10%). The oldest class was more diverse in its choices and listed the solar energy article most. Among the responses listed in the miscellaneous category was the following one: "Well it had a lot of things that made me laugh harder than I ever did." Overall, the "April Foolers" feature was indicated as least liked (32%), but with 23 of the 25 choices again coming from the same one class. Many fewer negative than positive responses were given (47 vs. 67). Except for four 5th graders who stated they liked least the fact that the magazine was in Spanish, various other features were chosen by only one or two students. For the four classes which rated the various magazine features, the pictures were preferred most, then the stories, variety of topics, and games. Based on the total sample, the respective percentages were 70%, 47%, 40%, and 31%. The vocabulary used was least liked (by 22% of the total sample), with 15 students in the youngest group (the combined 3rd- and 4th-grade class) who said they "disliked" it, and none who said they "liked" it. This same class was also responsible for the low overall ranking of the games, since 22 of the 23 "neither liked nor disliked" responses came from this group. It should be noted that in contrast to the other classes, the 7th- and 8th-grade bilingual students all reported liking the vocabulary used in the magazine.

When asked what, if anything, was different about this magazine from their other school materials, only 26 responses were given. The two most common differences indicated were the pictures (by 12% of the total sample) and the use of Spanish (10%). The next most frequent response, "It was more interesting" was given by only two students. One 6th-grade student commented, "I am glad they put Spanish Ranger Rick so everyone who knows Spanish not English can enjoy it in the same way (those with) the English Ranger Rick does."

Ninety-five percent of the students in this Vineland sample said they wanted to continue receiving the magazine, with only three students saying they "did not care." Given their limited Spanish skills, it is not surprising that half of them (39 or 51%) preferred to have it in English and another 25% in both English and Spanish; only 24% preferred to continue receiving the Spanish edition only. As would be expected from the previous reported findings, 15 of the 18 students who preferred the Spanish edition were in the middle school, with 10 of them from the bilingual 7th- and 8th-grade class. All classes preferred to use it in school (79% overall).

Only five students (all from the middle school) expressed a desire for any changes in the magazine (e.g., "change to English," "take out poems," and "make more interesting"). In addition to wanting to continue receiving it themselves, at least six students recommended that it be used in every lower and upper elementary grade level from 1 through 8. The younger students recommended continuing it in grades 2 through 4, whereas the middle-school students recommended it be used in grades 4 through 8, with students at each grade level selecting their own grade level most. The few students who provided additional remarks after completing the questionnaire commented on it being in Spanish, about how much they had liked it--finding it fun and learning a lot--and about reading it with their parents and siblings. One student said, "I used it by reading it to others, and what I thought about it was that it was fun and taught a lot that I didn't know."

The principals at both schools responded to the School Questionnaire. Given the very different characteristics of the students in the two schools, it is not surprising that many of their responses varied. The English version of Ranger Rick was in neither school, but the middle-school principal had read it and liked it a lot. The principal for the younger elementary school students liked the pictures in the present Spanish version most, but liked least the lack of value for the English-dominant student. This principal pointed out that the bilingual program was a transitional one rather than a maintenance one and, consequently, a Spanish edition was of limited educational value for teaching purposes, although it might be valuable for use as supplementary material. The activities in the Activity Guide appeared suitable, but due to the principal's limited Spanish, he/she felt unable to judge the various features of the magazine and had not discussed the students' reactions with them. This principal also commented that the English-speaking teacher had said his/her students were quite frustrated in spite of assistance from the bilingual teacher, and that the bilingual teacher viewed the vocabulary as "inappropriate", but had enjoyed the pictures and found them useful for oral expression.

The principal of the middle school was much more positive about the magazine and reported liking very much the variety of features, the interest level of the stories, and the illustrations. He/she liked most the science articles and least the fiction stories. The students with whom it was discussed also were reported as liking the magazine. Although no similar Spanish materials were available in the school, the magazine's primary potential was viewed as supplementary material in the bilingual classes and as a library resource.

Four of the five teachers who had students participating in the study completed the Teacher Questionnaire. The large differences in the students' and teachers' experiences and skills in Spanish led to very different uses of the magazine and quite different reactions. In the lower elementary school the combined 3rd- and 4th-grade bilingual class used the magazine during their Science period. Although all the students were Hispanic and were described as speaking Spanish "pretty well," 90% of them were rated as "hardly able at all" to read or write it. In contrast, 80% of them reportedly could speak English "pretty well" and read and write it "somewhat." The Spanish magazine was used between 30 to 45 minutes, and the teacher used the "April Foolers" and hedgehog articles and translated about half of the words. This teacher liked the pictures most and the long reading sections least. Although the pictures were considered "very appropriate," and the stories and games "appropriate," the vocabulary level was considered much too difficult and "very inappropriate." The students were described as actively engaged during the magazine's presentation because of the pictures, but they could not read the articles. Nevertheless, they reportedly learned names of animals they had seen, but had not previously identified.

The other participating class in this school was a regular 4th-grade class comprised of English-dominant students. Only one student participated in an ESL program and was not in the classroom when the questionnaires were used. Although 56% to 70% of the students were Hispanic, less than 25% were described as speaking Spanish at home. All of them were described as reading and writing Spanish "hardly at all," but English "pretty well." The magazine was used in lieu of the students' regular Social Studies period. Given the frustration of using a Spanish translation with these students, less than 30 minutes was devoted to its use, with the teacher reading only the "Ranger Rick and His Friends" story and translating all the words while doing so. Neither teacher used the Activity Guide.

Although neither teacher knew if the English version of Ranger Rick was in the school, both had read it and liked it. Both agreed there were no similar Spanish materials in their school. Although the bilingual teacher recommended the magazine's use with younger students (with simpler vocubulary) for Language Arts, Science, and Spanish, the 4th-grade teacher saw no further use for it.

The two teachers who responded from the middle school were much more positive in their reactions to the magazine. For the 7th- and 8th-grade bilingual class students, all of whom were described as speaking, reading, and writing Spanish "very well," but only 3% of them doing so in English, 76 to 90 minutes were spent with the magazine during their Spanish class. The students were asked to read all the sections and comment on them. No translation was required. This teacher reported that he/she liked the up-to-date information most and disliked nothing. All features were considered "very appropriate." The only change suggested was to include stories about Latin America. The students were described as actively engaged, liking the photos and poems most, and disliking nothing.

The 6th-grade Science teacher was similarly enthusiastic. Since this was a large regular team-teaching class, with approximately only 20% of the students

Hispanic, only seven students participated in the study in a separate small group. Approximately two class periods (46-60 minutes) were devoted to the magazine, using seven articles considered relevant to the science units that had been or would be taught. The students read and discussed them together on their own since the teacher did not speak Spanish. This teacher stated he/she liked most the photographs, variety of content, and activity pages, and disliked nothing. The students also reportedly liked the pictures and activity pages most ("The students kept rushing excitedly to me to show me photographs and comment on them"). Although neither teacher nor students recommended any changes, the teacher noted that the vocabulary appeared too difficult since the students do not read or write Spanish frequently at home or at school even though most speak it somewhat. Neither teacher had used the Activity Guide, but the Science teacher noted that it was "great" and would be helpful later.

Both teachers perceived their students as having learned from using the magazine, as evidenced by their recalling facts in later discussions and referring to the stories in later Science periods. Both recommended its further use. The bilingual teacher indicated its use for 7th- and 8th-grade students in Languages Arts, Science, and Spanish, and the Science teacher recommended it for Science in 5th through 8th grade. Although the regular English version of Ranger Rick was in the school library, both teachers commented on the lack of similar Spanish materials.

As can be seen in the above descriptions, the teachers in this site had very different reactions to the magazine. Despite a relatively large Hispanic population in the community, most of the students' competencies in Spanish were quite limited. Whether or not they spoke Spanish at home, few could read or write it. For the younger students, especially, adaptation to a much simpler vocabulary seems necessary. Nevertheless, while for some teachers this led to a very frustrating experience, for others it was most rewarding. The following quote from the non-Spanish-speaking 6th-grade Science teacher exemplifies the latter, "I felt the Spanish-speaking students were pleased that somebody cared enough to publish a magazine in their language. They were, in a small way, reminded of the importance of their cultural traits. This was obvious after evaluating their comments. Many also felt proud to be able to do something (read Spanish) that the majority of the students couldn't do." In emphasizing the factual knowledge the students may acquire from the magazine, it is important that such potential affective and social influences are not ignored.

In early December, Ms. Mercado from the Princeton office accompanied me to Vineland, New Jersey to meet with students and staff at one of the two schools in Vineland participating in the Spanish Ranger Rick study. As part of a district-wide reorganization last fall, this school began serving 5th- and 6th-grade students as well as those in 7th and 8th grade. As we later learned, despite initial community and staff fears, the change seems to have occurred smoothly. At this school, 7th- and 8th-grade students attend classes on the second floor, and their schedules permit little, if any, contact with the students in the lower grades.

After a brief meeting over coffee with the principal, he introduced us to the bilingual and ESL program teachers. They share the same classroom, using a partition to separate the students in their respective classes. The teachers, one male and one female, then arranged for us to talk in a small combined group with the 14 Hispanic 7th- and 8th-grade students present who had participated in the Ranger Rick study. The discussion soon became lively as the students became more at ease in sharing their reactions. When individually asked what parts of the magazine they had liked best, it soon became apparent that the students had read it all, not just those parts covered in school. Many instances were provided of sharing the magazine with other family members. One student noted how pleased his mother and grandmother were to have something from school that they, too, could read. Several students expressed their pleasure doing the games and puzzles (although one student said the instructions to the word game were too difficult), and they commented on the "great" photographs and drawings. An exception was the photograph of the hippopotamus on page 2, which the girls, in particular, thought was "too ugly." One student later summed up well the interest in learning encouraged by the magazine when he said, "I liked it a lot. I didn't just learn things; it encouraged me to seek out more." That same student later requested detailed instructions for subscribing to the magazine. We left these students with a strong sense of their enjoyment with their class experience with the Spanish Ranger Rick magazine and with having the opportunity to share their ideas and reactions with us.

In further discussion with the bilingual and ESL teachers, who also were very favorable in their reaction to the magazine, they recommended that future issues should continue to be in Spanish only. They perceived that an issue that combined Spanish and English would not be helpful because it would not motivate the students to work hard and to use other resources when they had difficulty with the vocabulary.

Upon our return to the principal's office, he brought us to one of the 5th-grade classrooms where three 5th-grade female teachers whose Hispanic youngsters participated in the study were sharing a free period. These teachers reported that they could give the magazine to only a few of their students since most of the Hispanic students in these regular classrooms could not read Spanish well enough to understand the content, though they were able to speak and understand it. Since these teachers could not read Spanish, the children read the magazines on their own. They reported that the students had all said they liked the magazine, but wanted it in English. One teacher noted, however, "Maybe they said they wanted it in English so as not to be different from the other kids." Although these teachers commented that a Spanish edition of the magazine would be valuable for bilingual classes, they perceived no value for it in regular classes. To exemplify the difficulty using it with Hispanic students in regular classes they pointed out that some of the participating students reported their mother or grandmother had to read it to them. For these teachers, such family involvement was not a "plus."

Following a brief lunch in the staff coffee room, the principal introduced us to a male 6th-grade Science teacher who was part of a three-teacher team in a large attractive open-area classroom. Since he did not read or speak Spanish himself, he had given the magazine to a small group of Hispanic students who could read Spanish to work with in a separate area in the classroom. He was extremely enthusiastic about the magazine, particularly because of his background in science. He also expressed the desirability of having materials that would enable these students to maintain their skills in the Spanish language. He noted that prior to using the magazine he had rarely heard any Spanish spoken in class. When reading the Spanish Ranger Rick issue, however, the students were all actively discussing the magazine in Spanish. In addition, they seemed proud to have something of their own. The teacher commented that these were the same students who were generally performing less well in class; this time they could do something the other students could not do. When the teacher later discussed the magazine with the students he learned that they liked the activities and photographs best, particularly the one on page two. The students had fun trying to identify this picture and had decided it was a newborn camel (wet, etc.). It should be noted in contrasting the mock horror/disgust reaction of the older bilingual class students to this picture, that these students were all males. One of the students also had told the teacher his mother enjoyed reading it, and another reported sharing the stories with younger siblings. For these students and the teacher the magazine was a big success. According to this Science teacher, there is a great need for stimulating, creative science materials. Although he reported using the regular English edition of Ranger Rick whenever he could, he perceived that the availability of a Spanish edition for the many Hispanic students in the community would fill a need presently unmet.

After an additional cordial chat with the principal about the magazine and some of the other special programs and facilities in the school, we left very appreciative of the friendly cooperation we received and encouraged by the overall positive experience students and staff had as participants in this study.

The questionnaire data and site visit interview emphasized the variability that may occur within as well as between schools. The findings emphasized the important influence that teachers' attitudes may have on students' reactions. They also indicated that although a student may be categorized as Hispanic, such labeling provides little information concerning that students' Spanish language proficiency. Many of the Hispanic students in this sample, especially the younger children, were not able to read the Spanish in the present issue of Ranger Rick, thereby frustrating both students and teachers. For the older bilingual students, however, it served a useful purpose and was welcomed by both students and staff.

In reviewing the findings from the two New Jersey sites participating in the study, both similarities and differences were revealed within and across sites. Given differences in (a) population densities, with one site urban and one rural, (b) the predominance of Hispanic students, (c) Hispanic origin, with one site serving predominantly Cuban students and the other Puerto Rican youth, and (d) the level of Spanish and English skills, with one site serving many new Hispanic entrants to the country, there are few if any general statements to be made concerning the state. However, as the Vineland data indicate, there may be considerable variability both within and across schools in a given site that make any composite comparative findings across population density and Hispanic origin difficult at best.

New York

New York City. Following review and approval by the Bilingual Bureau and the Proposal Review Committee of the New York City Board of Education, district bilingual coordinators disseminated information about the study to schools in their area. Unfortunately, despite the enthusiasms of the Bilingual Bureau, the lengthy review process enabled only a few schools to participate in the time available. Five schools participated in the study from three of the five city boroughs--the Bronx, Manhattan, and Queens. With the exception of one school with two classes (5th and 6th), the remaining four included one class each (a combined 4th and 5th, a combined 5th and 6th, and a 6th grade), with class sizes ranging from five to 31. Included in the sample were three schools in Manhattan, including a small alternative academy, one school in the Bronx, and one in Queens. All but one served pre-kindergarten or kindergarten through 6th grade; the fifth school comprised grades 3 through 5 only.

Student enrollment varied greatly across schools from 145 to 1,500, with the Hispanic percentage also ranging from 55% to 95%. In two of the schools, students were generally performing one-half to one grade below their expected grade level on standardized reading achievement tests. In two others, the average performance was one or more grades lower. One school did not provide a sample description, but since its location was in the same school district as one of the other schools, these demographics should remain appropriate. Although most of the schools did not provide percentages for the family socioeconomic categories on the Sample Description Form, one Manhattan school noted that 97% of the families in that school were on public assistance. Similarly, another Manhattan school noted that 70% of the families were employed in unskilled, nonfarm labor jobs or unemployed. In contrast, the Queens school had only 30% of students' families in these lower socioeconomic status categories (all unemployed), with an additional 30% of the families in both skilled labor and clerical/sales jobs, and the remaining 10% in the professional/managerial category. This same school had the smallest percentage of Hispanic students (55%).

The total sample responding to the Student Questionnaire was 130. Of those who reported their sex, 53 (or 42% of the total sample) were males and 46 (35%) females (one class did not provide sex identification data). Only 16 of these 130 students (12%) stated they had seen the English version of Ranger Rick before; most of them had seen it in school, half just once, and all checked that they had liked it. Ninety-three percent of the sample reported speaking Spanish at home (only nine children from two classes did not). Overall, 45% said they read Spanish "very well," 41% "pretty well," and 15% "a little bit"; none said they could "not read it at all." Only two classes, however, had a majority of students who responded they read well. Fifty-two percent of the total sample stated the Spanish in the magazine was "easy," 38% "so-so," and 10% "difficult." Consistent with these findings is the fact that of the 21 children of higher socioeconomic status, 17 responded they read "very well" and 20 said the present issue was "easy," whereas the class expressing the most difficulty reading Spanish also expressed more difficulty with the Spanish vocabulary in the magazine, with no one stating that it was "easy." Sixty percent of the students reported that the teacher did not read to them; 47 of the 52 pupils who said he/she did came from two classes. Fifty-nine percent, however, stated the teacher translated some of the Spanish, but most said it was only a few words. Consistent with the previous reported findings, one of the two classes where this did not occur was the Queens class in which the students responded the Spanish was easy.

Almost three-fifths (58% or 75) of the students reported doing further activities in school (essentially all the students in four classes and half in another). Half of these students (37) said their activities were based on the dinosaur article and 10 of them listed the "Search for Supersaurus" story. Nineteen students (15% of the total sample) reported building the Boxosaurus, and some did further library research for reports, but the second most frequent category used (by 16 or 12%) was "other" since 13 students in one class in conjunction with a concurrent class project on career education used the dinosaur articles to describe the attitudes and skills of an archeologist. Only 22 students (17%) reported doing further activities outside school; the most frequent responses were "reading more" (3%), "building a dinosaur model", or "studying more about animals" (2% each). Others mentioned going to the museum, thinking about not killing animals, and one student responded, "playing teacher at home and asking questions." Eighty students (62%), however, did report discussing the magazine with their families and/or friends, a majority in all but two classes. Slightly more than half of these (44) said they discussed the dinosaur articles; the next most frequent article mentioned was the one about hedgehogs. When asked what they had learned, most responses (32%) were coded as vague or "other," but 22% replied they had learned about nature or specific animals, and 15% described specific story facts. A few also mentioned learning about the need for conservation of natural resources and animals. Among some of the "other" responses given were "not assaulting animals", "memorizing poems", and "learning new words" and/or "how to speak Spanish."

When asked what they liked best, most students listed dinosaurs (18%), then "Ranger Rick and His Friends" (15%), and pictures (14%). Thirteen percent said "everything." When asked what they liked least, several said "nothing" or reiterated that they liked everything. The most frequent specific feature listed was "April Foolers" (34 or 26%). Only a few students noted other specific topics, with no category receiving more than five tallies and most only one or two. Four students responded that they least liked the vocabulary ("too difficult"), but two others noted typographical errors in one of the words. In rating the various magazine features, these students generally reported liking the pictures and games most (80% each), followed by the stories (78%), vocabulary (73%), and variety (72%). Students in two classes rated nothing as "disliked," but of the 24 "dislike" tallies, nine were for the vocabulary. In this instance, as in many others, summary statistics often conceal the variability within and across classes. In contrast to the overall rankings, one class ranked vocabulary highest and one liked the games least.

In comparing this magazine with their other class materials, the animal stories, use of Spanish, and inclusion of games and puzzles were the differences mentioned most (15%, 13%, and 8%, respectively). Several vague responses also were offered as well as affective reactions such as enjoying it, and finding the issue more interesting, informative, and easy to understand. In noting class differences, it should be pointed out that 13 of the 17 references to the magazine being in Spanish came from the Queens class. Also, in those classes where a majority of the students found the Spanish easy, several mentioned the "good vocabulary."

Consistent with their expressed enjoyment in the magazine, almost all students said they wanted to continue receiving it; only three students in the New York City sample responded "no." More students (47%) expressed a preference for receiving the magazine in both Spanish and English; 26% preferred to receive it in Spanish, 21% in English, and three students checked "Don't know." Only two classes, each in a different area of the city, showed a preference (slight) for having it in Spanish only. Also, the class with the highest percentage of students who preferred to have it in both Spanish and English was the same class which expressed the most difficulty reading the present issue. The majority (65%) said they wanted to use the magazine in school, but a large percentage (46%) said they wanted to use it at home, sometimes in addition to school. Thirteen percent also mentioned other places (e.g., park, library, doctor's office).

Only 28 students, or slightly more than a fifth of the sample (22%), said they wanted some changes made. Nine students from one class mentioned a specific page (usually the hippopotamus on page two), nine other students desired that the magazine be made easier (eight of them from the same class that expressed the most difficulty reading the issue), and the remaining responses referred to different specific articles. Consistent with their very favorable reaction to the magazine, they recommended that it be used throughout the lower and upper elementary school grades. Overall the fifth grade was chosen by the most students (74%), followed by the sixth (55%), fourth, and seventh grades (43% each).

Only one class did not select its own grade level most (instead, the next lower level); this class comprised those students having the most academic difficulty.

The extent to which students provided additional comments ranged from none to almost all in any one class, in part due to their varied proficiencies in writing, as well as to the time provided and their interest. Some just reiterated the parts they had read or the activities in which they had engaged. The most common other responses were that the magazine was interesting, pretty, lots of fun, liked very much (in the words of some students, "fantastic," "wonderful," "exciting"), and that they hoped to continue receiving it. One student expressed his wish to join the Ranger Rick Club. In one class where most of the students gave lengthy responses, several noted that it was the first Spanish magazine that they had read. Several also mentioned discussing it not only in class but with their parents, asking questions, and liking it a lot. Two articulate students expressed well the feelings of many: "I liked the magazine a lot. It was beautiful. I learned many new words, and I liked the puzzles a lot. Everything we discussed with care. I learned many new things about nature"; and "I have used the magazine with much love and affection, and it interests me much. For me it is very amusing and strange. I saw many very strange animals I hadn't seen."

Three School Questionnaires were completed; two by a bilingual program director and one by a bilingual resource teacher. Only one of the schools was reported as having the English version of Ranger Rick available and only one of these staff members had read it before, reportedly liking it very much. They all gave very favorable reactions to this Spanish issue, although they differed somewhat on specifics. All liked the photographs and variety of topics very much, but one liked the games and interest level of the stories somewhat less.

Although one program director liked all the features very much, the vocabulary was liked to varying lesser degrees by the other two staff. When asked what they liked most, again the photographs, variety of topics, and stories were listed. When asked what they liked least, two said "nothing," but one replied "the poetry" since it was "too much a translation of English rather than an adaptation." Although one individual stated no changes were needed or desired, one person requested more accuracy in the use of accents and verb conjunctions (e.g., volávamos on page 27 and cájas on page 13), and the other noted that simpler vocabulary would maximize his/her different group's use.

These administrative staff had all discussed the magazine with the students who had participated in the study and reported that they, too, had liked it very much. No one reported having similar Spanish materials in their school, and they all recommended that a Spanish edition of Ranger Rick be continued across different subject areas. One recommended it be used in the 6th-grade Language Arts, Science, and Spanish classes; another recommended it also be used in 5th grade and in the current events period; and the third recommended its use in 3rd through 5th grade for Language Arts, Science, Spanish, and Social Studies. Their comments as to its educational value provided more detailed information. "It provides enrichment to the curriculum in the child's dominant language." "The children are exposed to very few magazines and newspapers that are written in Spanish. A magazine of Ranger Rick's caliber can be used to reinforce that which has been taught previously in terms of content, vocabulary and general reading skills as well as to introduce new concepts, especially those relating to science and nature."

In responding to its potential value for bilingual programs, they all noted its value for reinforcement of content and skills in vocabulary development in science and social studies areas as well as for exposure of students to subjects not usually covered in the curriculum by using the variety of topics the magazine offers.

In addition, two respondents for bilingual programs serving very economically impoverished families and a financially pressed school system commented on financial aspects: "Because this magazine is not itself a curriculum, it is essential that its price be within the means of the school and/or students"; and "Many of the children expressed a desire to read Ranger Rick at home. Perhaps a subscriptio could be offered to them through the school at a reasonable price. Most of our children just don't have any reading materials at home where they can apply those skills taught at the school."

With the exception of one teacher whose class had been observed, the remaining five teachers completed the Teacher Questionnaire. Their diverse descriptions of their students' Spanish and English competencies help explain some of the varied student responses obtained. In one Manhattan school, students in the younger class were described as all speaking Spanish "very well", with 70% reading "pretty well" and 50% writing "pretty well," whereas 80% could only speak, read, and write English "somewhat." The older students in the same school were rated as generally speaking Spanish "pretty well," but reading and writing both it and English only "somewhat." The pattern of speaking Spanish "pretty well" and reading and writing it less well was generally found except in the Queens school where 89% were described as speaking, reading, and writing Spanish "very well," and in the Bronx where they were described as generally speaking, reading, and writing Spanish only "somewhat." These New York students generally were described as speaking, reading, and writing English only "somewhat," with a relatively large percentage (30% to 35%) rated as "hardly at all" able to perform these skills; an exception was the Queens class which was described as generally performing "somewhat" to "pretty well." In two of the classes, however, the students' English skills varied considerably; 35% and 50%, and 30% and 40% were described as reading and writing "hardly at all" or "pretty well," respectively. Probably in all classes some students were very discrepant in their Spanish and English literacy skills and some were not, a factor that could lead to differences in both teaching and learning with any instructional materials.

In part due to these differences in student characteristics, the nature and extent of use of the Spanish edition of Ranger Rick differed across classrooms. The time varied from one to several periods; the number of articles used in class ranged from one to eleven. Some articles were chosen because they fit into current curriculum units, others due to students' perceived or expressed interest. Some teachers included various follow-up activities in other subject areas such as arts and crafts, library research, creative writing, and letter writing; some gave homework assignments to read and/or write about other articles; and some limited use to the one class period and the students' voluntary further activities.

All teachers were enthusiastic in their reaction to the magazine. They generally liked the photographs most (according to one, "since they provide concrete evidence of topics I was presenting"). Others also commented on the good layout and the stories. All but one teacher said there was nothing to list as least liked--"the magazine was most informative and the children both enjoyed it and learned from it. I can't find anything I disliked." The one teacher, however, noted that the vocabulary was difficult. When evaluating various different features of the magazine, several rated the vocabulary as "somewhat inappropriate." The photographs were consistently rated as "very appropriate" and the other features (the story topics and games/activities) as "appropriate" or "very appropriate." Similarly, in suggesting possible changes, one teacher requested easier vocabulary, and two suggested including a glossary of unfamiliar words for those experiencing difficulty and "to motivate them to look up unfamiliar words." A unique suggestion offered by one teacher was to have the children send in letters commenting on parts of the issue and to publish them.

Only two teachers said they used the Activity Guide (and found it helpful), although another said he/she had taken it home as a source of information for future activities. The only change suggested was that it also be a resource for activities in developing reading skills.

All the teachers commented on the active engagement of the students when the magazine was used. All participated, whether in class discussions or arts and crafts activities. Most reportedly seemed to like the pictures best, and many enjoyed the follow-up activities. One teacher noted that several students asked if they could read the magazine during their lunch period, and most teachers reported that their students took the magazine home to read and reread articles and to discuss them with their families. As for what the students liked least, two teachers mentioned their difficulty with some of the vocabulary, and one mentioned the hippopotamus picture.

The teachers also all responded that their students had learned from the magazine, as evidenced by recalling facts, the understanding revealed in later discussion of topics, the preparation of experience charts about the information learned, and their continued research on some of the articles. Their responses to how the magazine differed from the students' usual school materials, however, ranged from "not at all" to "somewhat." Some teachers provided no specific rationale for their response, but those that did said, "It let the students go on to other areas once exposed to some of the stories"; "Although not generally part of the curriculum, it could be integrated (into it)"; and "The information was presented in a more technical and sophisticated manner and the photographs were realistic." None of the teachers reported the availability of the English version of the Ranger Rick magazine, and none had read it before.

All the teachers reported that there were no similar Spanish materials in their school. Given that fact and their general enthusiasm for the magazine, they all recommended its continued use. They all selected the grade level in which they had used it, and all recommended that it be used in Language Arts, Science, and Spanish. Two teachers also recommended its use in Social Studies, and one noted its value for individual reading during the students' free period.

As was true of the program directors' responses, the teachers' responses to the open-ended questions on the educational value and potential use of a Spanish edition summarized best their feelings as well as providing additional information. In response to its educational value, they said, "I'd like to see this magazine, the Spanish edition, used as part of the science program. Facts are presented in such an interesting and attractive fashion that students seem to be more motivated and eager to read or have the stories read to them"; "It broadens children's knowledge in wildlife which these inner-city children are not exposed to in language familiar to them. It serves as enrichment activity in addition to a regular reading program. It encourages these children whose language is mainly Spanish to want to read such a well-edited and interesting, as well as beautifully illustrated, magazine as Ranger Rick which I personally found a pleasure to read"; and "The Spanish edition of Ranger Rick is of great educational value. It presents information in an attractive and appealing manner. The Spanish edition provides the occasional alternative from the day-to-day use of the developmental reader. It also sheds an attractive light on the Spanish language. (If a nice magazine like Ranger Rick is written in Spanish, then Spanish is a worthwhile language to know)." The remaining teachers also pointed out how worthwhile it was--both educational and enjoyable for the children.

In response to its potential value for bilingual programs, the magazine was again recommended for supplementary reading and enrichment. To quote from some of the questionnaires: "Excellent magazine! Well translated!" "From the available material on the market being translated into Spanish, it appears yours is the best I've come across." Some suggested changes, however, also were noted. "I think it's very much needed as a supplementary tool, but it should follow more closely the curriculum. If not, it could be used for leisure reading or individualized reading." Also, one teacher commented, "I believe when quoting in Spanish, quotation marks are not used; instead a hyphen is used to indicate a quotation." But the following teacher summarized well many of the favorable reactions noted earlier. "I think using the Spanish edition is most beneficial to any bilingual program in many respects. Primarily the children are exposed to a Spanish language edition of a well-known magazine. The children can see Spanish in a context which they are familiar with--that is, an informative children's magazine. They can see that Spanish is not only a language to be read and spoken, but a vehicle for information. A magazine like Ranger Rick promotes a positive attitude towards Spanish which is essential in any bilingual education program." And, in a final comment, this same teacher noted, "Enjoyed using; hope it will be available. It is important that the children be exposed to magazines, nature, their native language and a host of other things. Ranger Rick combines all these."

As was noted in the section in the Procedures chapter describing the sample, approval was received too late to include a larger sample of New York City classes. But as the above description indicates, for these urban economically disadvantaged minority youngsters, the Spanish edition of Ranger Rick provided a multifaceted aid that contributed greatly to both the educational needs and interests of students and staff.

New York City also was used for field-testing the data collection materials and procedures. Following review by staff at ETS and the National Wildlife Federation of the Spanish version of Ranger Rick's Nature Magazine and draft copies of the questionnaires that had been prepared for administering to students, teachers, and other relevant school personnel in the pilot study, a field tryout of the data-gathering procedures took place in two New York City District 4 schools in mid-October.

Due to the efforts and close cooperation of staff in the New York City Office of Bilingual Education, particularly those in the District 4 Office, arrangements were readily made to observe two bilingual classes using the Spanish edition of Ranger Rick and to interview participating teachers and administrative staff. In accord with the data collection strategy for the actual pilot study, both English and Spanish copies of the selected issue and accompanying activity guide were made available to school staff prior to the designated class period, and staff were instructed to use whatever content and mode(s) of instruction they desired.

Two schools participated in this field tryout--a bilingual school situated within a larger public school and P.S. ____--both schools located in "Spanish

Harlem." In the former school, a junior high 7th-grade bilingual class was observed; in the latter, a 6th-grade bilingual class was observed. The author was accompanied by Maria Santiago Mercado from the ETS Princeton Office. Immediately following each observation the participating teacher and a member of the school's administrative staff were interviewed concerning their reactions to the magazine and the various English version questionnaires, and their perceptions of the students' reactions.

The first observation took place in the alternative bilingual school during a thirty-five minute Language Arts class period. Prior to distributing the Spanish Ranger Rick magazine to the students, the teacher reviewed a class assignment to prepare sentences using several Spanish words she had introduced the day before. The words were from the Ranger Rick story "Piper Grows Up," a story about a baby grebe that she had selected for the present class period. After familiarizing the students further with the meaning of the words and encouraging their discussion, she distributed the magazine and began calling on students to read aloud from the selected story.

The teacher, a young Hispanic woman, continually moved around the classroom, providing students frequent verbal and nonverbal positive reinforcement as she posed many questions on the story content, called attention to the various illustrations, and expanded vocabulary and ideas. The students were actively engaged in the activity, with many volunteering to answer the various questions posed, and all attentive to the story. The class comprised 25 students, 7 boys and 18 girls, at least 80% of whom were Hispanic. All students were provided an opportunity to read aloud and/or discuss the story. Despite differences in Spanish fluency, the teacher's warmth and encouragement facilitated students' willingness to read aloud and to attempt to answer the questions posed. At the end of the class period the students appeared delighted to learn they could keep the Ranger Rick magazine, with one student asking, "You mean we can keep it forever and ever?" Following up the day's activity, the teacher assigned them homework to write a report on the story discussed.

Immediately after the class period, we discussed over coffee the class and materials with the teacher and principal. Both were very enthusiastic about the magazine and expressed a strong desire for more issues. Although the teacher reported that many of the articles included words not commonly used by the students in her class, she felt they were appropriate. Thus to facilitate their participation she had given them prior preparation on selected words. Both she and the principal felt the various questionnaires were appropriate and feasible and they could not foresee difficulties in responding. We ended our meeting anticipating continued use of the magazine in this class as well as its future use in other classes later in the year.

We then walked the several blocks to P.S. ____, where we were directed to the 6th-grade bilingual class that had been scheduled for us to visit. Again we observed a 35-minute instructional period. This was a much larger class than the one we observed previously; there were 37 students in attendance. There was a more even sex distribution. Also, there was greater ethnic diversity among the students (Hispanic and Non-Hispanic White, Black and Asian), and they evidenced a wider range of facility in speaking Spanish. (The class was described as an English-dominant bilingual class.)

As in the previous class, the teacher had carefully reviewed the Ranger Rick materials, selecting for use that section that appeared most relevant to the current class program. The story chosen was "Search for Supersaurus." Since the class had been working on a unit that focused on knowing oneself and alternative careers in order to make better career choices, the teacher directed the students to read this Ranger Rick story with the purpose of finding out what an archeologist is and does--his or her activities, interests, attitudes, skills, and personality. She had prepared a worksheet for recording these aspects, and after a 10-minute period of silent reading, she elicited comments from the class to fill in the record form she had drawn on the blackboard. There was considerable discussion among the students as they read the story. One student asked for a Spanish-English dictionary, after which the teacher inquired how many others wanted one. More than half of the class requested one and subsequently received it. During the reading, the teacher moved around the classroom and helped students with many of the words, while other students helped each other. During the subsequent class discussion, most of the students actively participated. Even those with seemingly limited facility in speaking Spanish made an effort to participate, as if not wanting to be left out. When responding became difficult, the teacher gave an increasing number of clues, but waited for the students to find an appropriate response. Reinforcement was frequent and positive. At the end of the class period, the students showed considerable pleasure when they learned they could keep the magazines. One child spontaneously approached the observers to say "thank you" for the magazine; another asked if more issues would come. Several students suggested the magazine also be used in other classes such as Spanish and Science.

In our subsequent discussion with the teacher she expressed considerable pleasure with the magazine content and stated that the vocabulary level was appropriate. Since this was considered an advanced class, some of their other Spanish books are more difficult to read. In reflecting on the students' obvious enthusiasm for the magazine, she said, "There are so few new materials available in Spanish; the children are excited when they get one." She also noted that several of the students currently active in a school-sponsored photography project spontaneously commented on the unusual effects achieved in some of the illustrations.

This teacher also found the various questionnaires appropriate and easy to complete, and looked forward very much to continuing using the magazine. She already planned to follow-up on the work initiated during this class period.

We next talked to District 4 staff from the Office of Bilingual Education. They were very enthusiastic about the magazine and its wide applicability for the students in their district. They also had reviewed the different questionnaires and found them appropriate and easy to complete. They gave their strong endorsement to the program and offered their full cooperation for participating in the pilot study.

In conclusion, in a field tryout of a Spanish version of the April 1980 Ranger Rick's Nature Magazine in two inner-city schools, teachers, students, and administrative staff showed enthusiastic acceptance of these new materials. For these 6th- and 7th-grade students of diverse ethnic background attending bilingual classes, the story content and illustrations in those sections used were apparently highly engaging and stimulated discussion and learning. The vocabulary, although somewhat unfamiliar, with teacher guidance was not too difficult. And perhaps most important, the students seemed to have received something they were pleased and proud to have as their own. School administrative and teaching staff were uniformly enthusiastic about the potential value of the materials and their use in a diversity of content area settings. For students, teachers, administrators, and observers this tryout was a good learning experience, and we all looked forward to more such experiences.

Pennsylvania

Bethlehem. Following discussions with the Bilingual Coordinator for the Bethlehem Area School District, she met with school administrative and teaching staff to review the study's goals and procedures. Three kindergarten through 6th-grade schools from this urban area in eastern Pennsylvania participated in the study, each providing one combined class of 4th-, 5th-, and 6th-grade students in group sizes of 8, 11, and 22. The three schools differed in the size of their enrollment and in the proportion of Hispanic students represented. At the time of the study, one school had an enrollment of 404 students, 55.5% of whom were Hispanic; another school was comprised of 215 students, of whom only 23.5% were Hispanic; and the third school had an enrollment of 482 students, 65% of whom were Hispanic. Although no family background data were provided, the majority of Hispanic students in this area are of Puerto Rican origin. Two of the schools reported that their students, on the average, were performing one or more grade levels below national norms, whereas in the third school, students generally were performing one-half to one grade level below their expected grade level.

Forty-one students from these three classes responded to the Student Questionnaire. Of those who identified their sex, 12 were males and 24 were females. Females predominated in all classes. Only two students said they had seen the English edition of Ranger Rick's Nature Magazine. They both had seen it only once and liked it. All but one student reported speaking Spanish at home. Most students said they read Spanish "very well" or "pretty well" (56% and 32%, respectively). In the one large class, all but one student stated they read it "very well"; none said they could not read it. Similarly, 68% responded that the Spanish in the magazine was "easy," and 29% said it was "neither easy nor difficult"; only one student stated it was "difficult." Again, in the largest class, all the students responded it was "easy," whereas in one of the other groups all of them said it was "neither easy nor difficult." The teacher reportedly read to the students in only one class, and for that class and for a few students in the other classes, the teacher translated some of the Spanish words.

Approximately half of the students (49%) reported doing further activities in school, but this was based on all of the students in one class and half in another. The parts used were "Search for Supersaurus," "Happy Bee," and the games. In the one class, drawings were apparently done as a class activity, whereas in the other class, some of the children said they read other articles or did puzzles. Only one student in the entire sample reported using the magazine further outside school--in this case, to read more. Although 61% said they discussed the magazine with their families and friends, again it was universally reported for one class and half of another; the former all reported they discussed "everything" and the latter, "dinosaurs" and "April Foolers." When asked what they had learned, the two most frequent categories used were animals and story facts. In one class, all the students responded that they had learned about animal life, whereas in the two other classes, 15 students in all stated specific story facts.

The most frequent response (by 41% of the sample) to the question concerning what they liked most in the magazine was "everything"; "dinosaurs" and "pictures" were the next most frequent replies (15% each). Eleven of the 17 who said "everything," however, were in the class in which students gave identical responses to most questions. When asked what they liked least, most students replied "hedgehogs" (20%) and "April Foolers" (10%), with one class all responding "hedgehogs," and the other classes giving varied responses. Several of the recently mainstreamed students said that some of the stories and words were too difficult. In general, however, fewer articles or features were identified as not liked. The 39 students who rated the various magazine features (95% of the sample) all said they liked the stories, and, with the exception of one student who said he/she "neither liked nor disliked" them, the pictures and variety; in contrast, only 68% said they liked the games, and 59% the vocabulary. No student, however, said they disliked any of these features. Again, in the one large class almost everyone rated everything as "liked"; whereas in another class all said they "neither liked nor disliked" the vocabulary used.

The most frequently mentioned difference noted by the students between this magazine and their regular school materials was the animals (primarily because the response "pictures of rare animals" was given by the largest class). Other differences expressed were that it was interesting, informative, and had good stories ("Because I can understand it in Spanish and like the stories"; "It teaches you new and different things"). The students in this site were almost unanimous in wanting to continue receiving the magazine; only two said "no" or that they "did not care". Almost three-fourths (71%) of the sample expressed a preference for having the magazine in Spanish; another five and four of those responding said they would like to receive it in both Spanish and English and English only, respectively. Most (63%) said they would like to use the magazine in school, but a majority (56%) also wanted to use it at home.

Slightly over half of the students (21 or 51%) stated they would like some change(s) made in future issues. In one class all 11 students (27%) responded they wanted easier exercises. The next most frequently requested change (by 22% of the sample) was the page two picture of the hippopotamus. Nevertheless, given their general enthusiasm for the magazine, students recommended its use from kindergarten through eighth grade, with the 5th, 4th, and 3rd grades recommended most (by 73%, 63%, and 61%, respectively). One class recommended grades 3 through 5, another mostly 3rd and 4th grade, and the third mostly 5th and 6th grade.

Examination of the additional comments written by the students after completing the questionnaire reiterated their pleasure with the magazine. In one class the students noted "the many interesting things," "information that was very scientific," and the desire to receive it more often. In another class three of the students responded, "Thank you for the Spanish magazine." Perhaps their attitudes are expressed best by the class that noted, "We have read the magazine in school and it is our opinion that it is excellent." Since this class was described as engaging in considerable discussion, it seems more likely that the universality of the response was one of student consensus rather than having been dictated by the teacher.

All three principals responded to the School Questionnaire. Two schools reportedly had the English version of Ranger Rick available, one in the library and one currently being used in the bilingual classes; the third principal did not know if it was available. All, however, had read it before at least twice and two reported liking it a little and one a lot. Although the principal serving a small percentage of Hispanic children did not respond to many of the items, the other two principals were enthusiastic about the magazine; they perceived all the features as pleasing and appropriate. One principal especially liked the pictures and interest level of the stories and viewed both the stories and games as interesting and educational. The other principal remarked that he/she liked it all, that the teacher and students were very pleased with the test copy, and that they were all very appreciative to have been able to use it. What this principal liked most was "the fact that it was in Spanish." Neither principal mentioned anything they liked least. When asked for desired changes, the one principal, however, did suggest more games and a vocabulary level more suitable for elementary students; the other principal simply stated that the present format was good. Two of the three principals reported that there were no similar Spanish materials in their schools, but the third indicated some similar materials in the ESL lab.

The two principals who responded recommended further and expanded use of a Spanish edition of Ranger Rick. The one respondent recommended its use in grades 1 through 6 in Language Arts, Science, and Spanish, and the other recommended its use in kindergarten through 5th grade in the bilingual Language Arts and Science classes. In evaluating the potential use of a Spanish edition of Ranger Rick in bilingual, ESL, or other special programs, the one principal remarked that with three bilingual classes in the school a Spanish edition would be an extremely valuable tool. ("The variety of topics, stories, games and activities are a very good experience for the students. It motivates the students to read.") The other principal also responded that the Spanish edition would enhance their bilingual program, and that there would be potential use as a tie-in to the Social Studies program. He/she noted, however, that use of the magazine in ESL classes was limited since "the time available for ESL limits use of such support materials."

The Teacher Questionnaire was completed by all three teachers. As noted earlier, all three participating classes were a mixed group of 4th, 5th, and 6th graders. Their Spanish and English competencies varied somewhat. The teacher rated the class of 11 students as able to speak, read, and write Spanish "pretty well," and as able to do so in English "somewhat." The small group of eight, five of them 4th graders and only one a 6th grader, all of whom had recently been mainstreamed into a regular classroom, were described by their teacher as fluent in speaking and reading Spanish (rating their performance "very well") and as writing Spanish "pretty well." In contrast, their English speaking and reading fluency was rated "somewhat," and they were generally described as "hardly able at all" to write English. In the third and much larger class of 22 students, the teacher reported that although the students could speak, read, and write "very well" in Spanish, they could perform these skills "hardly at all" in English.

All teachers presented the magazine during a Science period, but the nature and amount of time spent with the magazine varied. One class spent 30 to 45 minutes with four features chosen by the students that the teacher read and, in a few instances, translated. Another class spent 76 to 90 minutes with five features, some chosen by the students and some by the teacher as related to the curriculum, but the teacher did not read to the students nor do any translation. The third class spent more than 90 minutes, since the magazine was used for a Reading period as well as Science. In this class, eight features were used, with two stories read by the teacher with no translation required. Two teachers used the Activity Guide: one for the poems, "Ranger Rick and His Friends," and the Nature Club, and one for the "Ranger Rick and His Friends" story only. Both reportedly found it helpful. The third teacher said that although he/she had read it, it was not used since it was incompatible with his/her teaching style.

These teachers were very enthusiastic about the magazine and generally viewed it as appropriate for the students who participated in the study. With the exception of one teacher who rated the games as "somewhat appropriate," all other ratings of vocabulary, story topics, pictures, and games were "appropriate" or "very appropriate." When asked what they liked most, the responses were: "stories and animal photos"; "topics discussed and pictures"; "excellent quality and material." No one mentioned anything they liked least, and one teacher replied, "I liked the whole book." The only changes suggested were additional activities and guides or questions for each article so that students could work more independently. One teacher, however, remarked, "I think the way it is, is just fine."

Similarly, in describing their students' reactions, they all agreed that they were actively engaged when the magazine was presented and liked best the stories and pictures. Two teachers said there was "nothing" their students did not like; the other mentioned the picture on page two. As one teacher commented, "The students were delighted when they noticed the magazine was in Spanish." They all also agreed that even in the short time involved, the students had definitely learned. Although one teacher did not provide specific examples for that judgment, the other two reported that the children asked many questions, were involved in active discussion--"all raising their hands to participate"--and their faces showed their understanding and enjoyment.

They all reported there were no similar Spanish materials in their schools, and in comparing the present issue of Ranger Rick with the students' regular class materials, two rated it as "somewhat different" and one as "very different." The two similar ratings focused, however, on very different aspects. The one teacher noted the students' greater involvment in class discussion and curiosity; the other commented on the attractive and colorful way the magazine was presented. The teacher who rated it as "very different" said he/she "never saw a magazine of this quality in Spanish."

Thus, it is not suprising that they all strongly recommended its continued use both across age groups and subject areas. The three recommendations were as follows: 3rd- through 6th-grade Science; 3rd- and 4th-grade Science and Spanish and 4th- through 6th-grade Social Studies; and 3rd- through 5th-grade Language Arts, Science, and Spanish.

One teacher noted that the English edition of Ranger Rick was in library circulation, but none of the three had read it. They all indicated, however, the potential educational value of the Spanish edition in their schools. They all agreed on its excellent enrichment value for their bilingual classes: "I think it's very valuable to awaken the curiosity of the pupils. It is an excellent magazine for the classroom"; "We don't have any material like it. It reinforces learning in an enjoyable way"; and "It could be easily incorporated into our Reading and Science classes." One teacher also noted its potential educational value for ESL classes: "It could be used as a follow-up or for individualized teaching."

In summary, the participating students and school staff in the Bethlehem Area School District were enthusiastic in their acceptance of a Spanish version of Ranger Rick's Nature Magazine and provided evidence for its appropriateness, need, and considerable instructional and motivational value for these urban and predominantly Puerto Rican youth.

Texas

Ben Bolt. The Palito Blanco Independent School District, which was located in a rural area south of San Antonio, at the time of the study served 450 students in prekindergarten through 12th grade. Ninety-three percent of the student population was Hispanic and reportedly generally performed at one or more grade levels below their expected grade level on standardized reading achievement tests. Eighty percent of the students came from low socioeconomic families (45% and 30%, respectively, of household heads were employed as unskilled, farm or nonfarm laborers and 5% were unemployed). Although the school district had originally signed up three ESL classes (a 4th, a combined 5th- and 6th-, and a combined 7th- and 8th-grade class), only two classes participated and questionnaires were received from only seven 6th-grade students. The 7th-grade students were described as unable to read the questionnaire, although both Spanish and English versions were available.

The seven 6th-grade ESL students comprised five males and two females. Six of them reportedly had read the English version of Ranger Rick in school two to four times, and all had liked it. Although six students said they spoke Spanish at home, they described themselves as generally not able to read it well. Three stated they read Spanish "pretty well," three "a little bit," and one "not at all"; six of the seven found the Spanish in the magazine difficult. Thus, it is not surprising that the teacher reportedly read the magazine to them and translated most of the words.

Although the students described doing no further magazine-related activities in or outside school, all of them said they discussed the magazine with their families and/or friends. (The "April Foolers" feature and the pictures were each mentioned three times, and one student referred to "all the strange things.") They all reported learning the names of animals, and two of them mentioned learning about "strange" pictures.

When asked what they liked most, six responded "the animal stories" (the seventh student said, "I don't know because I can't read it"), but they were less unanimous in what they liked least; two indicated the Spanish and one each the hedgehogs, the puzzles, the "trick" pictures, and the bird. In rating the various magazine features, all of the students said they liked everything but the vocabulary (four checked "disliked," and three "neither liked nor disliked"). In comparing the magazine with their regular school materials, the main difference noted (by five students) was the use of Spanish; other comments made were that it was fun, interesting, and included more on animals.

All the students said they wanted to continue receiving the magazine, but five preferred it in English only and two in both Spanish and English; no one wanted to receive it in Spanish only. For this group of students the majority preferred to use it at home than school (5 vs. 2). Despite their expressed preference for an English edition of the magazine, no one requested that the magazine itself be changed. Most students (4), however, recommended it be used in grade 8, with one recommendation each for grade 6 and grade 2. The higher grade level recommendation may reflect the difficulty these students experienced in reading the magazine. All the students wrote additional comments after completing the questionnaire. Most of them responded that they enjoyed the puzzles and pictures, and some said they especially liked the "trick" pictures.

The School Questionnaire was completed by the Teacher Corps team leader. Ranger Rick was available in the school library, and he/she had read it at least five times and enjoyed it a lot. With the exception of the vocabulary which was rated as "disliked," the other magazine features were described as "liked very much." He/she reportedly liked most the science articles and least the games. Although this staff member had not discussed the magazine with the students nor were there any similar Spanish materials available, he/she did not recommend its continued use in its present form. No potential was seen for bilingual or ESL classes since the students could not read the

Spanish. This respondent further commented, "A combined English/Spanish edition with dual columns of print in either language would be helpful if the Spanish was more appropriate for our area. Texas Spanish is not like your magazine."

The Teacher Questionnaire was completed by both the 6th- and 7th-grade ESL teachers. Both teachers indicated that although their students were Hispanic and spoke Spanish in their homes, all of the 6th graders and 95% of the 7th graders could read Spanish "hardly at all." In contrast, the 6th graders were rated as speaking, reading, and writing English "pretty well," and 85% of the 7th graders were described as speaking and reading it "pretty well", and 15% "somewhat." Their English writing skills, however, were much poorer, with only 10% rated as performing "pretty well" and 90% "somewhat."

Both teachers used the magazine in a Language Arts period for 30 to 45 minutes. The 6th-grade class used six of the first seven articles (omitting "Who Knows?"), and the teacher read three of them ("April Foolers," "Ollie Otter's Fun Games," and the hedgehogs article) because the students were interested in the pictures. Since the 7th-grade students could not read the Spanish edition, they only discussed the pictures, and the teacher read the "Search for Supersaurus" story to them. Both teachers translated most of the words. Neither one used the Activity Guide.

When asked what they liked most, both teachers listed the pictures; the 6th-grade teacher also indicated the high interest articles. Both of them reported that they liked least the vocabulary and would like future issues of the magazine changed to a simpler vocabulary level. Similarly, the 6th- and 7th-grade teachers, respectively, rated the pictures and story topics as "very appropriate" and "appropriate," and the games as "appropriate" and "somewhat inappropriate" (since the 7th-grade students could not read the instructions); both rated the vocabulary as "very inappropriate."

The 6th-grade teacher stated the students were actively engaged during the class session and that they liked most the bright colorful pictures in the magazine and least the fact that it was too difficult to read. He/she noted that the students shared the pictures later with their friends. Also, they appeared to have at least learned the names of several different animals. The 7th-grade teacher, however, said that although these students also liked the pictures, they were not actively engaged during the class session since they could not read the information, and he/she did not know if they had learned anything.

Both teachers indicated that there were no similar Spanish materials in the school. Neither knew if there was an English version of Ranger Rick's Nature Magazine in the school, although both had read it elsewhere and liked it. They both viewed the present Spanish issue as "somewhat different" from their students' usual school materials, with one teacher referring to its science content and the other not elaborating further. Due to the fact, however, that it was too difficult for these ESL students, neither teacher perceived the magazine in its present form as having potential use in their school, and they did not recommend its continuation.

Thus, for these Mexican American students in this small rural Texas community, a Spanish edition of Ranger Rick to be useful would require a much simpler vocabulary to more adequately match the students' limited Spanish reading skills. Given the students' greater proficiency in English and their preference for receiving future issues in English, however, an English edition might be more appropriate at this time to encourage the students' learning and appreciation for the science topics covered. This seems particularly relevant when the students' families, as appears to be the case in this instance, have had limited schooling and may experience difficulty reinforcing their children's Spanish reading skills.

San Antonio. Following review and approval of the study design and instrumentation by the Assistant Superintendent in charge of academic programs for the San Antonio Independent Schools, appropriate Area Superintendents, and the Office of Bilingual Education, a number of school principals and staff volunteered to participate in this pilot study of the feasibility of a Spanish edition of Ranger Rick's Nature Magazine.

The San Antonio sample comprised 10 classes from five elementary schools and two classes from two middle schools. The elementary schools served students in pre-kindergarten or kindergarten through 5th grade; the middle schools served students in grades 6 through 8. The schools were located in several school districts in this large southwestern city, but the majority were located in a large district serving primarily economically disadvantaged Hispanic families. Three of the elementary schools had large student enrollments (730, 750, and 995), and two were much smaller (229 and 335). No school enrollment data were received from the middle schools. With the exception of one school, the participating elementary schools had a student population that was at least 97% Hispanic and which, on the average, performed one or more grade levels below their expected grade level on standardized reading achievement tests. Almost all of the families of the students in these four schools were employed as unskilled, nonfarm laborers or were unemployed. One school checked only the unskilled, nonfarm category; the respective percentages for two of the other schools were 76% and 10%, and 40% and 45%; and in the school with the largest enrollment (995) and located in the central city area, 90% of the families were described as unemployed. The fifth elementary school differed considerably; 58% of the students were Hispanic, they performed on the average one-half to one grade level lower than their expected grade level on standardized reading achievement tests, and they came from families in which most heads of household had clerical/sales or skilled labor jobs. The two middle schools provided demographic data only on students in those classes they anticipated participating in the study. At least 98% of these students were Hispanic and they generally were performing one or more grade levels below their expected grade level on standardized reading tests; most of their parents were employed in unskilled nonfarm labor jobs or were unemployed (60% and 40%, and 95% and 0%, respectively, for the families in the two schools).

Two of the elementary schools provided one class each (one a 4th grade, the other a 5th grade); two schools both provided a 4th and a 5th grade; and in one school three classes participated (a 4th, a 5th, and a combined 4th and 5th grade). The largest elementary school had planned to have several classes participate, but after further staff review of the magazine they decided that the vocabulary and content were too difficult for their students, most of whom came from very impoverished and poorly educated families, and many of whom were recent arrivals from Mexico. One class participated from each of the middle schools--a 6th grade and a combined 6th, 7th, and 8th grade. With the exception of one 5th-grade group of eight students, class sizes ranged from 17 to 29.

Two hundred and twenty-nine students responded to the Student Questionnaire. Since only 17 (7%) of these were in the 7th- and 8th-grade subgroup, comparative percentages across groups would be misleading. However, any differences in the general overall trends between the elementary school and middle-school students are pointed out in the following description of the findings. For those who provided sex identification, there was an approximately equal representation of males and females (46% vs. 50%). There were only four classes (three favoring girls) with a difference of four or greater between the sexes.

Only 30 students (13%) said they had seen the English edition of Ranger Rick. Most of them had seen it in school only once (although almost as many reported seeing it five or more times), and all but two said they had liked it. All were 4th or 5th graders, but although all five elementary schools were represented, a third of them came from one 5th-grade class. Eighty-eight percent of the sample said they spoke Spanish in their homes; in only two 4th-grade classes, however, did everyone say they did. In describing their ability to read Spanish, 54% said they could read it "a little bit," 21% said "pretty well," 15% "very well," and 9% "not at all"; 12 of the 21 students who said they could not read it at all were 4th graders. All of the students in the combined 6th- through 8th-grade class said they could read Spanish "pretty well" (82%) or "very well" (18%), but most of the 6th graders said they could read it only "a little bit" and three said they could not read it at all. When asked to rate the difficulty of the Spanish in the magazine, approximately a third each said it was "easy," "neither difficult nor easy," or "difficult" (32%, 33%, and 31%, respectively). The 4th-grade students comprised at least 51% of those who perceived it as difficult (the combined 4th and 5th grade was not included in this percentage; if they had been, the percentage would have increased to 65%). All but one of the students in the combined 6th- through 8th-grade class said it was "easy"; again, however, the 6th-grade students in the other middle school reported considerable difficulty reading Spanish and 57% of them rated the magazine's Spanish as "difficult."

Slightly over half of the students (51%) said their teacher read the magazine to them, but this differed by school and by class within school. As might be expected, teachers reportedly read to the students in those classes where students expressed the most difficulty reading Spanish. Thus, for example, the teacher for the 6th-, 7th-, and 8th-grade class did not read to the students, but the teacher for the 6th-grade class did. Similarly, 54% of the students said their teacher had translated at least some of the Spanish. For more than half of these students (54%), who represented a 4th-, 5th-, and a 6th-grade class, the teacher translated most or all of the Spanish.

Only 20% of the students said they did further magazine-related activities in school. Thirty-five of the 46 students who did were in the two middle-school classes, the remainder were scattered across classes and schools. The "Happy Bee" story, dinosaur article, and "April Foolers" feature were the only parts of the magazine mentioned (by 22, 13, and 3 students, respectively); 21 of the 22 students who listed the "Happy Bee" story were in the 6th-grade class, whereas 10 of the 13 students who mentioned the dinosaur article were in the combined 6th- through 8th-grade class. The most frequently mentioned activity was building models, but again, 21 of the 22 responses were given by the 6th-grade class who reported building a solar home model; the one elementary school student built a dinosaur model. The next most frequently mentioned activity was the study of reptiles and amphibians by 10 students in the combined 6th- through 8th-grade class. Two students in this same class also reported doing vocabulary activities. Three elementary school students reported drawing the hippopotamus and the dinosaur bones. Several students, however, did not specify what parts of the magazine were used or what they did.

Even fewer students (14%) reported doing any magazine-related activities outside of school. The 6th-grade class accounted for 21 of the 33 students who said they did; the remainder were students from the various 5th-grade classes. None of the 6th-grade students specified what part of the magazine was used, but the elementary school students referred primarily to the "Build a Boxosaurus" and dinosaur articles. Students in the 6th-grade class all reported doing "projects" (specified later by their teacher as related to the dinosaur article), whereas the few elementary school students mentioned building a dinosaur, drawing pictures from the stories, and looking up information in the encyclopedia.

Approximately a quarter of the sample (24%) said they discussed the magazine with family and/or friends. With the exception of one 4th-grade class and the combined 4th- and 5th-grade class in another school, there were some students who reportedly did so in every class; only the 6th-grade class, however, had a majority of students who said they did. The dinosaur article, hedgehogs story, and "April Foolers" feature were mentioned most (by 12, 9, and 8, respectively, of the 55 students). The "Search for Supersaurus" story, "the animals," and "all the magazine" were responses given by four students each; no other response was made by more than one person.

When asked what they had learned, 23% of the students listed specific story facts, 17% science topics, 11% story titles, and 10% said they learned about various animals. Other less frequent responses were learning about conservation issues and scientific methods (8% each) and how to build dinosaurs and solar home models (3%). Among the many (79) vague and miscellaneous responses given (by 34% of the sample) were those by 27 students in one 4th-grade class who said they learned "nothing." Most of the responses in the "other" category were vague references to learning about dinosaurs, learning a lot, and so forth. In examining the class data few trends were apparent.

Most of the students who referred to scientific methods were in one 5th-grade class and they gave highly similar responses about learning how the dinosaur bones were dug up, and/or how the casts were put on bones. Most of the 4th-grade students in another school referred to learning about fossils and dinosaur bones. The students in the combined 6th-, 7th- and 8th-grade class all listed various diverse topics (e.g., "I liked it because I learned a little bit of Spanish, animals, solar homes, and dinosaurs"), whereas most of the 6th-grade students gave the same response--"learned about reptiles, mammals, dinosaurs, and hedgehogs."

Students also were asked to list whatever they liked best and least about the magazine. In responding to what they liked most, 44% listed the pictures; the next most frequent responses were the dinosaur article, hedgehogs story, and stories in general, which were given by 14% and 10% each, respectively. The only age trends noted were that more than two-thirds (65%) of the students who listed the pictures were 4th graders (69 of 101). Also, the 4th-grade classes were more likely to give a few common responses rather than a more diverse array. Particular classes, however, showed differential preferences. For example, the 6th-grade students listed the "Build a Boxosaurus" article most, one 5th-grade class mentioned the "Ranger Rick and His Friends" story most, whereas most students in another 5th-grade class responded "Search for Supersaurus" and the "Sea Poems." Included among the "other" responses were enjoying the book's format and the way it was written. Six elementary school students (four from one 4th-grade class), however, said they liked "nothing."

Many fewer students reported any dislikes. In fact, 55 of them (24%) said they liked "everything" and several others mentioned specific things they liked instead. The "use of Spanish" and "the vocabulary" were the two replies given by the most students (16% and 15%, respectively). Seven percent of the students listed the "April Foolers" feature and the dinosaur article, but no other specific article or feature was mentioned by more than 4% of the sample. Included among the "other" responses were references to homework rather than to the magazine itself. In examining the class data, all but one or two students in a 4th- and a 5th-grade class said they liked "everything" (one 5th grader responded, "The 'Happy Bee' because I hate to talk about houses and it was too long"), whereas all the students in the 4th-grade class who previously said they learned nothing, responded that they disliked the vocabulary. Again, there was a marked contrast between the two middle-school classes; only three students in the combined 6th-, 7th-, and 8th-grade class mentioned anything they liked least, whereas 15 in the 6th-grade class did, with 11 responses referring to the magazine being in Spanish.

Consistent with the above findings, when asked to rate various magazine features, the pictures received the most "like" responses (83%) and the vocabulary received the least (40%). An approximately equal percentage of students rated the stories and games as "liked" (67% and 66%, respectively), and 59% said they liked the magazine's variety. Similarly, the vocabulary received more than twice as many "dislike" ratings (34%) as any other feature, as well as more neutral ratings (23%). Ratings differed, however, within and across schools. In one 4th-grade class, all but four ratings were "liked," whereas in another 4th-grade class, the majority of students only liked the pictures and games and gave numerous "dislike" ratings. In some classes, such as the combined 6th- through 8th-grade group, all the features received approximately an equal number of "like" ratings, whereas in others there was a small interval hierarchy or a close cluster with one distinctly different category (in this case, vocabulary). In one school, neither class gave more than two "dislike" ratings, and the combined 6th-, 7th-, and 8th-grade class gave none.

When asked to describe in what way this issue of Ranger Rick differed from their other school materials, 53% of the students referred to it being in Spanish. The next most frequent differences noted--the pictures, stories, and better quality--were only listed by 9% and 8% each, respectively. Eleven students (5%) referred to the inclusion of specific articles and ten students (4%) said that the magazine was more interesting, fun, and informative. A few students also mentioned the inclusion of games and activities and the magazine's greater variety. Included among responses in the "other" category was, "You don't have to study it or take it home for homework." Examination of the class data, however, indicated variation within and across schools. Both the 4th-grade class in which all the students had said that they disliked the vocabulary and the 6th-grade class referred solely to the Spanish. Spanish was the predominant response in the remaining 4th-grade classes, but a few students also noted other differences. ("It's different because it's in Spanish and it tells how the animals live and how they were born too.") In the oldest group, the combined 6th-, 7th-, and 8th-grade class, more students pointed out that they liked the magazine and thought it was better made. With the exception of one 5th-grade class and the 6th-grade class, students in the older grades generally indicated various differences. Some of the following comments exemplify these findings: "Because it's good for children and has good stories"; "You get more information and helps you to understand things"; "It's difficult because we don't have any other books in Spanish"; "It's more interesting and better than reading books and because it tells about things we don't have"; and "In that this book has different and amusing stories whereas school books don't."

In general, the students had enjoyed the magazine and most (72%) said they wanted to continue receiving it; 15% said they did not care either way, and 11% said they did not. Thirty of the 35 students who said they did not care were 4th graders, with 22 of them from the one 4th-grade class that generally had responded most negatively. Similarly, more than half (54%) of the 26 students who said they did not want to continue using the magazine were 4th graders. Responses differed, however, both within and across schools. Consistent with the very favorable reaction to the magazine they expressed earlier, only one student from the two classes in the higher achieving school said he/she did not want to continue using the magazine. Despite the difficulty experienced by many of the 6th-grade students reading the magazine, all said they wanted to continue receiving it. As expected from their previous responses, all the students in the combined 6th- through 8th-grade class also said they wanted to continue using the magazine. In the other schools with more than one participating class, there was one class in which all responded favorably, and one that was predominantly negative.

Most of the negative reactions appeared to be related to the use of Spanish and the students' limited competence in reading Spanish. More students (44%) said they preferred to receive future issues in English only; 21% said they preferred it in both Spanish and English, and 17% preferred a Spanish edition. There was some variation across schools, however. In two elementary schools students preferred to have the magazine in both Spanish and English, and in two schools, one elementary and one middle school, the students preferred a Spanish edition. A slightly higher percentage of students (52% vs. 45%) said they preferred to use the magazine at home, but this also varied within and across schools. More students in both middle schools said they preferred to use it in school, as did those in one of the elementary schools with a single 5th-grade class. In schools with more than one class, preferences generally varied. Also, in some classes most students said they wanted to use it in both places. Only two students mentioned using it in other places (friends' or relatives' homes). Some students provided rationales for their choice of location: "In school because I like to think about it with my friends"; "In school because my teacher tells me more"; and "In home because it's quieter."

Slightly more than a quarter of the sample (27%) indicated they would like changes made in future issues. One elementary school accounted for 32 (53%) of the 61 students who requested changes. In contrast to the results from other sites, the oldest students did not request the most changes; only one student in the combined 6th-, 7th- and 8th-grade class said he/she wanted a change made, but no further information was provided. As might be expected, the most frequently mentioned desired change (by 13% of the total sample) was that the magazine be in English. Other changes requested were the addition of more pictures and animal stories, more and better games, the deletion of certain pictures, and that the vocabulary be revised. One student suggested that the magazine be in both Spanish and English.

Nevertheless, at least 33 students recommended that the magazine be used at every grade level from kindergarten through 8th grade. The grade levels most represented in the sample were selected most, with the 6th, 5th, and 4th grade recommended by 43%, 41%, and 37%, respectively, of the total sample. With the exception of a few 4th-grade classes in which more students recommended a lower or higher grade level, students generally selected their own grade level most often. Almost all the students in the one 4th-grade class that generally responded negatively recommended the magazine be used in the

2nd grade. With the exception of that 4th-grade class and the 6th-grade class which only recommended it be used in 5th and 6th grade, students in the other classes recommended various grade levels, including six classes that checked all of them.

The number of students in a class who wrote additional comments after completing the questionnaire ranged from zero to all. Their responses exemplified the varied reactions both within and across classes. For example, in one 4th-grade class, a student said, "I love it. It was a pretty book--all those pictures in the book," whereas another said, "I don't like to read in Spanish and never want to read it again." In some classes, most gave a common response (e.g., "I liked the pictures"); in other classes, students gave diverse comments. Some students reported facts they learned, whereas others reiterated their likes, and sometimes, dislikes. A cross-section of responses across classes include the following: "I think it was very well made--the stories, the poems, I don't think it needs anything else"; "I liked it because it was with pictures. The stories were kind of good, but too long"; "They should put it in English and Spanish and have more things to read"; "Add more games"; "I like it because it has many different animals. It teaches you to make things"; "I like it a lot. It's a good magazine and is in Spanish and it's very easy"; "Didn't understand the vocabulary because it was very hard"; "I like Ranger Rick a lot, but it's better in English"; "I like to be a girl like other girls and we liked it in Spanish and it looked neat in Spanish because we can learn and talk in Spanish and do a lot of fun and win (when) you do nothing you can help us to do something. I like the magazine, to use it is fun. Thanks for your help" (written in English); "I like to read about it. I like reading it with the teachers. I like it a little bit because it was in Spanish"; "I use it for fun and to learn new things. I think it's a very interesting magazine"; "I like to read the book most. I also like the pictures in the book. Could you please send us some more Ranger Rick. I took the Ranger Rick home"; "I thought the magazine was exciting, interesting, and fascinating. I like the story about porcupines and dinosaurs. I also liked pictures of the porcupine family"; "I liked most the dinosaurs. Thanks for your help. Can learn to do something and learn how to talk in Spanish. I like the pictures and stories in the book a lot"; "I thought this magazine was different than other books, not just because it's in Spanish cause it showed me things I never knew"; "Dear Ranger Rick, thank you for taking your time by doing the magazine and I really enjoyed your magazine"; "I really enjoyed the magazine. Send more please"; "The magazine is most important. I learn more and can learn Science also"; "It's entertaining and explains everything well"; "I thought this was the most exciting book I've ever read at school or other places"; "I used it in class and is very interesting. Because of it, I would like to continue my studies"; "The magazine is good for our reading and knowing words and pronunciation--important for better grades"; and "When asked by our teacher we all wanted to respond it's very good."

School Questionnaires were received from two elementary schools and one middle school. The principal and two teachers completed forms for the one elementary school; participating teachers completed forms for the other two schools. They reported that the English edition of Ranger Rick was available in the library in the middle school and in one of the elementary schools. In the two schools where it was available, the principal of the elementary school (but not the teachers) and the middle-school teacher responded that they had read it numerous times at home and liked it a lot.

In general, these school personnel were positive about the present Spanish issue of Ranger Rick. Although the elementary school teachers said they disliked the vocabulary, all of them liked the pictures very much. Two of them also liked the variety of topics and interest level of the stories very much and the other said he/she liked them; the games were rated as "liked very much," "liked," and as "neither liked nor disliked." The elementary school principal also liked the pictures very much, and rated the other features as "liked." The middle-school teacher said he/she liked the pictures very much, liked the vocabulary, variety, and interest level, and felt neutral about the games. In responding to what they liked most, two of the elementary school teachers noted the pictures ("because they created a lot of discussion") and one replied, "I thought the format was interesting and attractive." The middle-school teacher responded, "The readings were entertaining and the photographs were excellent." All the elementary school teachers denoted the vocabulary as liked least, with one commenting that he/she liked least that "the children were unable to read the magazine." The middle-school teacher liked least the Teacher's Guide and the elementary school principal did not indicate what he/she liked most or least.

Consistent with their dislikes, two of the elementary school teachers recommended that the vocabulary be changed, with one suggesting "a very limited and controlled vocabulary." The middle-school teacher recommended that a glossary or a section containing a glossary with perhaps some comparison of regional words be included in future issues. The other respondents left this item blank. All the elementary school teachers said that they had discussed the magazine with the students; two reported that most of the students neither liked nor disliked it, and one replied that some students in the class liked it and some did not like it at all. In contrast, the middle-school teacher responded that the students said they liked it very much.

Although none of the respondents reported any similar Spanish materials in their schools, due to different experiences with the present issue of Ranger Rick, their recommendations for continued use varied. Two of the elementary school teachers were uncertain, whereas the third recommended it for use in 4th-grade Language Arts, Science, and Spanish. The elementary school principal recommended that it be available in the library, and the middle-school teacher recommended it be used in 6th-grade Language Arts, Science, and Spanish. Their responses to the open-ended questions best reflect their views. When asked to comment on the magazine's educational value, they said: "It is very limited since only a few children can read it independently. A few others can read it with a lot of help. Those that could read it realized some growth in vocabulary"; "It works well with other materials in the library"; "The Spanish seemed somewhat difficult. The children, therefore, seemed slightly discouraged with it. But it was enjoyable"; "A Spanish edition of Ranger Rick would be beneficial if on their grade levels. The one we used was too advanced"; and "The magazine could be part of a Reading Center, it could also be used to introduce unit (science) and could also be part of a Reading or Language Arts class."

Most, however, saw its potential use in bilingual, ESL, or other programs. They responded as follows: "Possibilities with those who have a good foundation in Spanish reading skills"; "Could be used for monolingual Spanish-speaking students"; "I don't teach bilingual or ESL classes, but it seemed interesting"; "It would be very beneficial for bilingual students in Reading and Science"; and "Could be used in a bilingual program in a reading class, a reading center, science class, or science center." The concluding comment from a 4th-grade teacher reflects well the conflicting feelings of the teachers of the youngest students and those with very limited Spanish reading skills. "The magazine was excellent, just not appropriate for these particular students. I received about 50 questionnaires but only could work through some lessons with a limited number of students. Most of them could not comprehend enough to make the effort or results worthwhile. I think there is a need for this type of magazine."

Teacher Questionnaires were received for 10 of the 11 participating classes. One of the elementary school teachers did not complete a questionnaire, but since he/she responded to the School Questionnaire (as did several other teachers), his/her views about the magazine are represented. The data from the elementary school staff will be presented first, followed by those from the middle-school staff.

As noted earlier, two elementary schools had one class participating in the study, a 4th grade and a 5th grade. Despite the absence of a Teacher Questionnaire, data from the School Sample Description form and the School Questionnaire indicated that the 4th-grade class was at least 99% Hispanic and the students spoke Spanish in their homes and probably had limited proficiency in both Spanish and English. Consequently, the vocabulary in this Spanish edition of Ranger Rick created considerable difficulty for both the students and teacher, although certain features such as the pictures were quite appealing and many of the students expressed their pleasure in using the magazine. The individual who completed the Teacher Questionnaire for the 5th-grade class in the other school stated that only 25% of the class were Hispanic and spoke Spanish in their homes, but these data are not consistent with previous information that the school population is at least 97% Hispanic nor the fact that the individual also checked that 56% to 70% were in a bilingual or ESL program.

According to the questionnaire, the 5th-grade class spent less than 30 minutes with the magazine during a Language Arts period. Although all the articles were checked as used, the teacher did not read nor translate any of the Spanish. He/she also did not use the Activity Guide. Whoever completed the questionnaire made several other responses difficult to interpret. For example, when asked what he/she liked most, just the word "dog" was listed, although it appeared that the word "pictures" had been erased. Although responding "nothing" to what was liked least, it was recommended that in future issues the birds be changed--another ambiguous response. All the magazine features, however, were rated as "very appropriate."

The students were described as actively engaged when the magazine was used and as liking best the pictures and least the penguins. The respondent was uncertain, however, whether they had learned from the experience.

Although not knowing whether similar Spanish materials were available, the respondent viewed the Spanish edition of Ranger Rick as "not at all different" from the students' usual school materials. The English edition of Ranger Rick reportedly was not available, nor had he/she read it. The individual did not respond to the question of the magazine's educational value, but when asked if he/she perceived any potential use in bilingual, ESL, or other special programs, the respondent replied, "I don't like Spanish." Not surprisingly, therefore, he/she did not recommend the continued use of a Spanish edition of Ranger Rick in that school. Given the small amount of time spent with the magazine and the staff member's apparent lack of involvement in its use and negative attitude toward Spanish, one would expect the experience for the students to have been at best of limited value.

Two elementary schools had both a 4th- and a 5th-grade group participating in the study. As noted in the School Sample Description form, these schools varied considerably in the proportion of Hispanic students enrolled and the socioeconomic backgrounds of the students. For this study, however, participating classes within schools also differed. In the one school, although both classes consisted primarily of Hispanic students, the teacher for one class described at least 86% of them as speaking Spanish in their homes, whereas reportedly only 25% to 40% did so in the other class. Also, students in the former class were rated as generally speaking Spanish "somewhat" and reading and writing it "hardly at all," but as speaking, reading, and writing English "very well." Students in the latter class were described as speaking Spanish "very well," but only reading and writing it "somewhat." They, too, were rated as speaking English "very well," but in addition, reading and writing it "pretty well." Very few students in either class were enrolled in a bilingual program.

The 4th-grade group spent 76 to 90 minutes during their Social Studies class to read five articles and to have the teacher read four others based on the children's interest. Given the students' limited ability to read Spanish, the teacher translated most of the words. The 5th-grade students spent 30 to 45 minutes on the magazine during their Science class. The teacher read eight stories to the class that were selected because they seemed most relevant to Science studies and reportedly translated all the words. Neither teacher used the Activity Guide.

When asked what they liked best, the 4th-grade teacher indicated the pictures and the 5th-grade teacher listed the "Search for Supersaurus" story. Although the latter teacher commented further that he/she enjoyed all the stories, articles, and activities, the 4th-grade teacher replied that what he/she liked least was the students' lack of interest. In rating the various magazine features, both rated the pictures as "very appropriate" and the games as "appropriate"; the story topics were rated as "very appropriate" ("are relevant to Science") by the 5th-grade teacher and as "appropriate" by the 4th-grade teacher, and the vocabulary was viewed by both teachers as difficult and rated "very" and "somewhat inappropriate" by the 4th- and the 5th-grade teacher, respectively.

Since the 4th-grade students experienced so much difficulty with the Spanish, they were described as not actively engaged when the magazine was used; they reportedly, however, did enjoy the pictures and discussed them at length. In contrast, the 5th-grade students were described as actively engaged and appeared to especially enjoy constructing the carton dinosaur, but they, too, were described as liking least the fact that the magazine was in Spanish and needed to be translated by the teacher. Similarly, the 4th-grade teacher reported that the students had not learned, whereas the 5th-grade teacher thought they had as evidenced by their interest in archeological excavations.

Both teachers reported there were no similar Spanish materials in the school. The English edition of Ranger Rick, however, was available in the school's library and both teachers had read it there numerous times and enjoyed it a lot. The present Spanish edition of Ranger Rick was viewed as "very different" from the 4th graders' other instructional materials because of "the very interesting articles, but the Spanish turned them off," whereas it was perceived as "not at all different" by the 5th-grade teacher because it "correlated very closely with their Science and Weekly Reader studies." Due to the fact that the Spanish had proved too difficult for the students in their classes, neither teacher saw its educational value and did not recommend its continued use. As the 4th-grade teacher commented, "The majority of students do not read or write Spanish so it was necessary to translate. This causes the effect of the intent to be lost." They also thought the Spanish vocabulary too difficult for students in the bilingual program. The 5th-grade teacher noted, however, "I believe the lower grades would benefit more from the Spanish edition. By the time they are in fifth grade, their English speaking, reading, and writing ability far outweighs their Spanish ability."

The experience of the students in the other school was quite different and, therefore, led to very different recommendations. At least 86% of the 4th-grade students were Hispanic, but only 71% to 85% were described as speaking Spanish in their homes, and 56% to 70% were in a bilingual program. Most of them (65%) were rated as speaking, reading, and writing Spanish "pretty well," but 20% were rated as only able to perform "somewhat." As expected, they were more proficient in English--with 90%, 85%, and 95%, respectively, rated as speaking, reading, and writing it "pretty well." Only 41% to 55% of the 5th-grade students were described as Hispanic and only 25% to 40% of them as speaking Spanish in their homes; few, if any, were in a bilingual program. They were rated as speaking Spanish "pretty well," reading it "somewhat," and able to write it "hardly at all." Since they were in a regular class, they would be expected to be more proficient in English. Their teachers rated them as generally speaking and writing English "pretty well" and reading it "very well."

Both classes used the magazine for 30 to 45 minutes during a regular Science class. The 4th-grade teacher read the "Build a Boxosaurus" and hedgehogs articles to the students since they were fascinated with the colorful pictures and also interested in animal facts and stories. Approximately half of the words were translated. Four of the stories were used in the 5th-grade class, but the teacher did not read any of them. He/she also translated about half of the words, however. Neither teacher used the Activity Guide.

Both teachers enjoyed the magazine, especially the "beautiful" and "colorful" photography. One teacher also indicated how much he/she enjoyed the articles. Although the 5th-grade teacher responded that there was nothing disliked since "every part was thoroughly enjoyed," the 4th-grade teacher referred to the vocabulary because it was "difficult even for the better Spanish readers." Consistent with these responses, the 5th-grade teacher recommended no changes and the 4th-grade teacher said, "I would like to see an easier edition with an easier reading level." Their ratings of the various magazine features were very similar. Both described the story topics and pictures as "very appropriate," and the games as "appropriate." Consistent with their students' relative difficulty reading Spanish, the 4th-grade teacher rated the vocabulary as "very inappropriate" and the 5th-grade teacher rated it as "somewhat inappropriate."

Both teachers, however, viewed their students as actively engaged when the magazine was used. The 4th graders appeared to like best the hedgehogs story because "they seemed eager for me to continue reading the selection." The fifth graders appeared most interested in the "Search for Supersaurus" story and the teacher commented that the topic had been discussed in a previous Science lesson. Neither teacher indicated anything their students liked least. The 5th-grade teacher, however, was uncertain if the students had learned anything, but the 4th-grade teacher thought that his/her class had learned--as evidenced by their recall of facts and their generalizing what they had newly learned to things they already knew.

Although the one teacher did not know if there were similar Spanish materials in the school or an English edition of Ranger Rick available, the other teacher said they were not. Neither teacher had seen Ranger Rick before, and the 4th-grade teacher perceived the present Spanish issue as "very different" from the students' usual school materials because "it provided new facts the children did not know." The 5th-grade teacher did not respond as to its comparative difference.

Despite the difficulty with the vocabulary, these teachers and students had enjoyed the magazine and both teachers recommended its continued use for their respective grade levels. The 5th-grade teacher, however, recommended it be used in Spanish classes, and the 4th-grade teacher in Science. Both felt the magazine was potentially useful for students in the bilingual program, although the 4th-grade teacher added that it would be beneficial for the advanced Spanish-speaking students.

One elementary school had a 4th-, 5th-, and a combined 4th- and 5th-grade class participating in the study. Although at least 86% of the students in all three classes were Hispanic and reportedly spoke Spanish in their homes, few, if any, were enrolled in a bilingual or ESL program. All the 4th-grade students were rated as speaking Spanish "somewhat," and 90% of them as able to read and write it "hardly at all," with the remainder able to do so only "somewhat." In contrast, 90% of them were described as speaking, reading, and writing English "pretty well", and only 10% as able to do so "hardly at all." Students in the other two classes were somewhat more proficient in Spanish. Those in the combined 4th- and 5th-grade class were rated as speaking Spanish "pretty well," but they, too, were rated as able to read and write it "hardly at all." They were described, however, as speaking, reading, and writing English "pretty well." The oldest group was more proficient in both Spanish and English. Ninety percent of the 5th graders were evaluated as speaking Spanish "very well" and 10% "pretty well." Most (70%) also were able to read it "pretty well," with 30% able to do so "somewhat" (20%) or "hardly at all" (10%); the comparable percentages for writing Spanish were 50%, 30%, and 20%. Although somewhat less proficient in speaking English than Spanish, they were considerably more proficient in reading and writing English than Spanish. Fifty percent of them were rated as speaking English "very well" and 40% "pretty well"; the comparable percentages for reading and writing English were 40% and 50%, and 30% and 55%, respectively.

The nature and extent of the magazine's use differed across classes, but the teachers and students reportedly generally enjoyed the experience. The 4th-grade class spent 46 to 60 minutes with the magazine during Spanish and Science periods. The teacher read four of the stories that seemed most interesting to the students and, due to the students' very limited Spanish skills, translated most of the words. The magazine was used in the combined 4th- and 5th-grade class for 45 minutes a day for three days during a regular Language Arts class. The teacher read the two dinosaur stories and reportedly translated only a few words. Since the 5th-grade students used the magazine for 30 to 45 minutes on their own during their free reading time in a Language Arts period, no information was provided on what articles were used. None of the teachers reported using the Activity Guide.

All the teachers enjoyed the magazine and noted in particular the photographs and "beautiful illustrations." Two of the teachers also added, "The subject matter was appealing to the students"; "The articles were interesting. Everything was very informative." Only the combined 4th- and 5th-grade teacher responded to anything liked least--"the Spanish was very difficult,"--but both that teacher and the 4th-grade teacher suggested that future issues be written on a lower less difficult level. One teacher also recommended that the Activity

Guide contain more activities, including work sheets to accompany some of the articles.

In rating the various magazine features, the pictures were rated as "very appropriate" by two teachers and as "appropriate" by one; the story topics as "very appropriate" by one teacher and as "appropriate" ("the kids loved") by two; the games as "appropriate" by two and not rated by one; and the vocabulary, not surprisingly, was rated as "somewhat inappropriate" by the two teachers for the younger groups and as "very inappropriate" by the 5th-grade teacher (who also added that it was difficult for the majority of students). Given the fact that the other teachers had noted earlier that the vocabulary was too advanced for their students, and that the 5th-grade students were described as much more competent reading Spanish, the differences in degree in the vocabulary ratings probably reflects, at least in part, differences in teachers' rating standards and/or willingness to give negative ratings.

All three teachers perceived their students as actively engaged during the magazine's use. The 5th-grade teacher did not comment on what the students appeared to like most, but the other two teachers both mentioned the photographs. ([The pictures] "created a lot of discussion. Also, they spent a lot of time looking at the magazine.") The 5th-grade students, however, reportedly liked the picture of the yowza least (and the 4th-grade students, the difficulty they experienced reading in Spanish). All three teachers also perceived their students as learning from their brief exposure to the magazine. As evidence for this view, they noted the students' good recall of information in class discussions, their application of information, and the fact that "they saw actual pictures instead of diagrams as they usually do."

One teacher did not know if there were similar Spanish materials or the English edition of Ranger Rick available in the school; the other two teachers confirmed the lack of similar Spanish materials, but noted there was a copy of Ranger Rick in the school library. Only one of the teachers had read Ranger Rick before (several times in school and had liked it a little). Two of the teachers compared the present Spanish issue of Ranger Rick with their students' usual school materials and they both described it as "somewhat different." The one teacher explained his/her response by saying that the magazine had "actual pictures and was very informative."

Despite the desire for a simpler Spanish vocabulary, all the teachers recommended that it be continued in their school. Each recommended his or her own grade level, but suggested different subject areas. All three teachers recommended its use for Language Arts, but the teacher for the combined 4th and 5th grade recommended it also be used in Science, the 5th-grade teacher suggested it be used in Spanish classes, and the 4th-grade teacher recommended all three subject areas. In their comments, however, they reiterated both their positive and negative reactions. "A Spanish edition of Ranger Rick would be of great educational value if it could be written on a lower level. The words were too difficult for them to read and understand"; "The children seemed to enjoy it very much. This edition which included animals, particularly the dinosaur, was very interesting. One problem, the Spanish was very difficult"; and "Only the top group could use it as a supplement." When asked to comment on the magazine's potential usefulness in a bilingual or ESL program, one teacher replied it was too difficult, but the other two teachers gave more favorable responses--"It would be good to use for Reading and Science"; and "Children are very verbal in Spanish. Because of the subject matter they seemed quite interested, reinforced their Spanish." Two teachers commented further upon completion of the questionnaire: "Activities should follow each selection to keep children interested"; and "It would be better in a 6th or 7th grade or an accelerated 5th grade."

Following up on that last comment we will now review the findings from the Teacher Questionnaires for the two middle-school classes that participated in the study. Each was located in a different school. The 6th-grade class consisted of students at least 86% of whom were Hispanic and spoke Spanish in their homes. In general, they were described as speaking Spanish "pretty well," reading it "somewhat," and writing it "hardly at all"; in English, however, they were rated as speaking, reading, and writing it "pretty well." Consequently, it is not surprising that less than 25% were enrolled in an ESL program. Although at least 86% of the students in the combined 6th-, 7th-, and 8th-grade class in the other school also were Hispanic and were described as speaking Spanish in their homes, their Spanish and English competencies differed markedly. Their teacher rated them as speaking, reading, and writing Spanish "very well" and English "hardly at all." They were enrolled in a bilingual or transitional program. Despite these differences in students' linguistic characteristics, as will be noted below, both staff and students found the magazine an enjoyable and instructive experience.

The 6th-grade teacher was a self-contained teacher and bilingual facilitator. He/she used the magazine for 46 to 60 minutes a day for several days during Science. The students worked with eleven articles and the teacher read the remainder since the stories were interesting to the students and the vocabulary was perceived as much easier to read and understand. However, the teacher reportedly translated about half of the words. The other class was part of a special pilot program with Mexican Nationals and Mexican Americans who are limited in English proficiency. The magazine was used for 30 to 45 minutes during Language period. Six of the articles in the magazine were read to the class by the teacher and by the Mexican students since the language was above the level of some of the Mexican American students. Given the students' general high level of Spanish literacy, none of the Spanish in the stories was translated. The 6th-grade teacher used the Activity Guide for the "Build a Boxosaurus" project and found it helpful. He/she suggested, however, that in the future the Guide include more class projects and illustrations. Although the other teacher did not use the Activity Guide, it was recommended that activities appropriate to both urban and rural and to wealthy and poor school districts be included.

Both teachers enjoyed the magazine. One expressed a preference for the "interesting" articles and the other for the photographs ("like the children"). They both, however, liked the pencil puzzles least. According to one teacher, these puzzles were above the students' level. Each suggested changes for future issues: "more articles with simple vocabulary" and "a glossary with perhaps some comparison of regional words." Although in different schools and teaching students with very different language skills, these teachers rated the various magazine features identically. The pictures and story topics were viewed as "very appropriate," the vocabulary as "appropriate," and the games as "somewhat inappropriate." The 6th-grade teacher elaborated that the vocabulary used in the games was too difficult.

Both teachers perceived their students as having been actively engaged during the magazine's use. The 6th-grade students appeared to like the "Search for Supersaurus" article best as evidenced by their checking out books on dinosaurs on their own, asking lots of questions, and by the fact that "they could hardly wait to make their dinosaurs." The students in the combined 6th-, 7th-, and 8th-grade group were described as most impressed with the photographs. Although nothing was mentioned as liked least for the 6th-grade students (as the reader may recall, most of these students responded on the Student Questionnaire that they liked everything), the teacher for the older group felt that these students did not like some of the rare terms nor the pencil games because they were too difficult. In addition to enjoying the magazine, both teachers perceived their students as having definitely learned from the experience. They recalled facts, both in class discussions and in response to the questionnaire, and they asked many more questions. The 6th-grade teacher also reported that both he/she and the students did follow-up activities to gain ideas for the dinosaur project and the students also took the magazine home to read to their parents.

Neither teacher reported any similar Spanish materials in their schools. The one school, however, did have the English edition of Ranger Rick in the library and the teacher in that school also had read it numerous times at home and liked it a lot. Both perceived the present Spanish edition of Ranger Rick as "very slightly" different from their students' regular school instructional materials. One teacher commented that the translation sometimes changed students' views and the other responded that some of the information, such as on the dinosaurs, was new.

Given the very favorable reactions both they and their students had to the magazine and the lack of similar Spanish materials, both teachers recommended its continued use at their respective grade levels. The 6th-grade teacher recommended it for Language Arts, Science, and Spanish; the teacher for the 6th-, 7th-, and 8th-grade group recommended it be used in Science. In commenting on the present issue's educational value, they said: "The magazine could be part of a Reading Center, it also could be used to introduce units (science) and could also be part of a Reading or Language Arts class"; and "As a whole, the students learned quite a bit of Spanish vocabulary that was not familiar to them before. It was a fun and learning experience for most of the students. They were eager to learn more!" One of the teachers also indicated that it would be useful for a bilingual program since it "could be used in a reading class, reading centers, science class, or science center." The following quote made by one of the teachers after completing the questionnaire expresses well the potential value of a Spanish edition of Ranger Rick: "All of us in our class enjoyed the magazine. It was quite a new experience for all of us. It gave those students who do not read English very well an opportunity to 'show off' at something they do well for a change! All of us learned new Spanish vocabulary words. It became a challenge for all of us, as well."

Site visits were made to four of the participating schools--three elementary schools and one middle school. Dr. Valentina Flores from the ETS Regional office in Austin accompanied me on these visits since she was very familiar with the area. The Area 3 Superintendent, the Office of Bilingual Education, and the area bilingual coordinators were most cooperative in making arrangements for our visits. We selected schools for diversity--different areas of the city, various grade levels, and special programs (i.e., Project Enable). Unfortunately, unusually cold, rainy weather during our two days there led to increased absenteeism, but we still were able to obtain a representative view of staff and student reactions to this Spanish edition of Ranger Rick.

We first visited one of the middle schools and had a lengthy and very cordial conversation with the principal and special program bilingual teacher who was coordinating the study in that school. They both were very enthusiastic about the magazine and expressed the considerable need for more and better Spanish instructional materials, especially for junior high students, and particularly in the Science area. They discussed general needs in bilingual education as well as those specific to the San Antonio situation. We arranged to return the following day to observe one of the special program classes using the magazine. Although the students had already read some of it, this bilingual teacher planned to continue expanding its use since both she and the students enjoyed it so much. They then provided directions to one of the elementary schools in another part of town.

We next visited a 4th- and a 5th-grade classroom in a small elementary school following a brief, friendly chat with the principal who was on luncheon duty. (Due to time pressures or lack of knowledge, the principal was unable to provide us any specific information about the pilot study experience.) In both classes, the teacher immediately turned the classes over to us and did not participate in the discussions. Although the students generally responded favorably about the magazine, their replies were brief and lacked enthusiasm. It was difficult to determine if they were merely being polite in responding positively. They did not mention any follow-up activities nor having discussed the magazine with their families or friends and had no suggested changes to recommend. Although they stated they wished to continue receiving the magazine, they indicated that they would prefer to have an English version or at least both a Spanish and an English edition in the future. Later, one of the teachers informed us that the vocabulary was very difficult for this group.

When Dr. Flores and I completed our visit at ___________ School, we telephoned the principal at another elementary school to inquire if it would be convenient for us to visit study classes that afternoon. He was very cordial and willing to cooperate and gave us detailed directions for driving to his school.

This school was situated in an old building in a generally poor, commercial neighborhood with no residential housing in the immediate vicinity. It is adjacent to a major thoroughfare. Upon arriving at the school we had a very friendly chat with the principal about the school and the study. He was very enthusiastic about his school's participation, but appeared unfamiliar with how the magazine had been used and with the staffs' and students' reactions. He gave us directions to two classes that participated in the study, one situated on the second floor of the main building and one in an auxiliary unit, and accompanied us to the former.

There were 26 students in attendance in this 5th-grade bilingual class. The teacher first spoke with us alone, expressing her pleasure with the magazine in general. She noted that she had taught art for five years and was particularly impressed with the illustrations which she described as beautiful. The class had experienced difficulty, however, with the vocabulary. The teacher reported that only nine of the 26 students were at the reading level for their grade; the reading levels of the other students ranged from grade 1 to grade 4. Consequently, they had difficulty understanding the content in many of the stories. She then turned the class over to us. After briefly describing the purpose of our visit, we pointed to various parts of our sample copy of the Spanish Ranger Rick magazine and attempted to elicit the students' comments. Most of the students showed various nonverbal signs of approval and interest, but few specific comments were offered. In response to our questions, however, they indicated they enjoyed the magazine and wanted it to continue. They preferred, however, that it be available in English.

After thanking the students and teachers in this class for their help with our research, we visited the second classroom. This class, comprising 25 4th- and 5th-grade students of mixed backgrounds, was much more enthusiastic about the magazine. Since the class was used to doing their work in English, the teacher and those students who spoke Spanish read the stories together and then discussed them. This teacher also reported that the Spanish vocabulary was too difficult for her students. However, in talking with the students, they volunteered facts they had learned from the stories discussed, and they expressed the hope they would receive more Ranger Rick magazines. In neither class did the students report discussing the magazine with their families nor did they know whether the English version was in the library.

Before leaving the school, we again briefly chatted with the principal who expressed considerable optimism in the achievements of the bilingual program. He remarked, however, on the students' general unfamiliarity with reading Spanish both in their homes and at school despite their ability to understand it when spoken.

The next morning we visited one of the elementary schools participating in a special Project Enable project, a bilingual program for gifted and talented youth funded under Title VII. We first met with the Project Enable coordinator, who discussed the project in general and then our study in particular. She was very enthusiastic about the magazine and reported that both teachers and students had enjoyed using it. She then brought us to the two classes participating in the study and introduced us to the teachers. The first class, a 5th grade, comprised an ethnic mix of 21 students. Six were black, four were Anglo, and of the remaining Hispanic students only five reportedly could read Spanish. The teacher actively participated in our discusssion with the students. Using inquiry techniques, she encouraged them to expand on their statements and to recall more of what they had done and learned. Both teacher and students were very enthusiastic about the magazine, especially the pictures and stories. The teacher explained that she had read several stories, translated many of the words, and encouraged activities they might do at home. For example, she built a dinosaur model for them to copy at home. The students recalled many of the facts they had learned from the stories. Several mentioned liking the poetry and wanting more games. Some students also reported stories their parents had liked.

Following our discussion in this class, we met with the 4th-grade class. There also were 21 students in this class with some ethnic diversity. Before talking with the students, the teacher explained that despite their being in a bilingual program they were reading Spanish at the 1st-grade level. Both the teacher and students said they enjoyed the magazine, particularly the colorful pictures. The teacher asked the students questions about what they had learned, and the students recalled many story facts. The students appeared very interested in the magazine and wanted to continue to read them. In contrast to the students in the other elementary schools we visited, these students said they preferred to receive future issues in Spanish.

Following our class visits, we met again with the Project Enable coordinator. She noted that for many of the students this had been the first time they had a magazine in their hands. Few of the families have magazines in their homes. She reported liking the magazine very much, but expressed a preference for a somewhat simpler vocabulary. As she stated, these students "have to deal with both new concepts and new vocabulary."

We then drove to the middle school to arrive just in time to observe the combined 6th- through 8th-grade group use the magazine. For this particular session, only six of the students were involved (all girls) for their Language period. (Four other girls and a boy were working at other tables on art projects, and one newly arrived Cambodian girl was given other work to do.) The group using the Spanish edition of Ranger Rick took turns reading the story "Piper Grows Up." Several vocabulary words and their definitions had been put on the blackboard ahead of time. The teacher asked questions and/or elaborated upon the content (in Spanish) after each student read one or two sentences.

Following the story, the teacher asked questions to determine the comprehension of earlier stories. The students appeared to be enjoying themselves during the class, and they responded that they had enjoyed the magazine and thought it was fun. The teacher reiterated how much she had enjoyed and learned from the magazine and felt it helped introduce many subjects for discussion. After expressing our appreciation to the class and teacher for their cooperation, we briefly spoke again with the principal and thanked him for his assistance and for a very enjoyable visit.

The findings, both from the mailed-in questionnaires and site visits indicated that the magazine had a mixed reception in this large Texas city. For the middle-school students and those elementary students with more advanced Spanish reading skills, the magazine was a very enjoyable learning experience. Many of the Hispanic children in this city, however, have very limited competency in reading Spanish (or English). Moreover, the educational system is (and has been for a long time) primarily focused on acquisition of English skills and not maintenance of Spanish skills. Thus, for those Hispanic students whose parents attended schools in this area, Spanish reading literacy generally has not been developed and the students, although able to speak and orally comprehend Spanish, are very limited in their ability to read or write it.

Also, those students who entered bilingual classes in San Antonio schools in kindergarten or the primary grades are usually more proficient in English than in Spanish by 4th grade. Consequently, despite the favorable reaction by school staff and students to the general nature of the magazine in many of these classes, a much simpler Spanish version and/or an English edition was preferred. Students and staff might also be more receptive to a simpler version of Ranger Rick in the primary grades to expand the Science curriculum in bilingual classes. For those middle-school youth who are limited in English, however, a magazine such as the present one can contribute a great deal to the present lack of adequate Spanish science materials. Since many Mexican students annually enter the San Antonio schools at various grade levels, the need remains considerable. Before concluding this section it also should be pointed out that the findings indicated that for those students who expressed the most difficulty reading Spanish, the extent to which the experience with the magazine was a rewarding or frustrating one was largely dependent upon their teachers' attitudes and skills.

Weslaco. Weslaco, Texas is a border town southeast of San Antonio. After expressing interest in participating in the study, the Director of Elementary and Secondary Curriculum for the Weslaco Public Schools reviewed the study's purpose and materials with local school personnel who assisted in the selection of participating classes. Questionnaires were received from one large elementary school, which, at the time of the study, had a total enrollment of 1,430 5th- and 6th-grade students, 96% of whom were Hispanic and who, on the average, performed at a half to one grade level below their expected grade level on standardized reading achievement tests. The majority of students' families were of low socioeconomic status; 43% of household heads were employed as farm laborers, 4% as unskilled, nonfarm laborers, and 9% were unemployed. Given the broad area served, however, the student population also included students from families employed in skilled labor (8%), clerical/sales (2%), and professional/managerial (10%) positions.

The study sample comprised 97 students from three bilingual and/or ESL classes (one 5th grade, one 6th grade, and one combined group of 5th and 6th graders) with class sizes of 33, 30, and 34, respectively. Each of these classes had more female students, resulting in an overall percentage of 58% females vs. 40% males.

Only two of these 97 students had seen the English edition of Ranger Rick's Nature Magazine; both had used it in their homes between two to four times and reportedly enjoyed it. When asked to describe whether they spoke Spanish in their homes and their ability to read it, only one student reported not speaking it at home, but only 32% said they could read it "very well"; 38% said they read it "pretty well," 25% "a little bit," and 2% "not at all." The 6th-grade class was the only one having a majority of students who reported that they could read Spanish "very well." Approximately two-thirds (64%), however, said the Spanish in the magazine was "easy," with only 4%--four students (three of them 5th graders)--who said it was "difficult." The teacher reportedly read the magazine for the majority of the students (60%); in the 6th grade he/she did not. But in all classes a majority of students stated the teacher translated a few words (80% overall).

Only 18 students (19%) reported doing any further magazine-related activities in school. Seven of the eight students in the combined 5th- and 6th-grade class who said they did described doing crossword puzzles; the one student did not specify what he/she did. The remaining 10 students were 6th graders, nine of whom said they used all the magazine, and one who said he/she used the dinosaur article. These students reported taking books from the library and doing further research as well as discussing the articles in class and answering questions. Similarly, only 11 students (11%, eight of them from the combined 5th- and 6th-grade class) reported doing further activities outside school, but with the exception of two 5th graders who described doing further reading, the other students did not specify what was used or what they did. The majority of the students (72%) also did not discuss the magazine with their families and/or friends. For the 27 students who did, 25 came from the two older groups. The combined 5th- and 6th-grade group all specified the "Ranger Rick and His Friends" and the "Green Velvet Princess" stories, whereas various articles were mentioned by the 6th graders, with the dinosaur article mentioned most frequently. One of the 6th-grade students mentioned visiting the museum with relatives, and another reportedly had informed his/her mother it would be good for her to read the magazine.

When asked what they had learned, the majority of students (42%) stated they had learned about nature and various animals, and 27% of them provided specific story facts. The classes varied considerably, however, in what they reported learning. In contrast to what might be expected, the youngest group described the most specific facts learned, primarily with reference to the dinosaur articles. In the combined 5th- and 6th-grade group, 25% of them referred to their concern for saving animals and other conservation issues, and several mentioned learning new words and learning to read and write. The 6th graders each mentioned learning about several different topics and was the only group that indicated a strong interest in solar energy and other science topics.

In responding to what they liked best, "Ranger Rick and His Friends," the pictures, and the dinosaur story were most frequently listed overall (by 28%, 24%, and 20%, respectively), with the poems also mentioned by almost a fifth of the sample (18%). Every story as well as most feature articles were mentioned by at least someone, with seven students noting that they liked everything. In contrast, when asked what they liked least, many fewer responses were given. The article most frequently mentioned (28%) was "April Foolers," followed by the hedgehogs story (12%); no other feature was referred to by more than six students. The relatively high percentage for the "April Foolers" feature was primarily due to the fact that 61% of the 5th-grade students listed it. They also were the only ones indicating the hedgehogs story. The most frequent response to this question for the two older groups, however, was that they liked "everything." In the 6th grade, especially, no more than two students mentioned any particular article, and 20 of the 32 said they liked them all. The overall ratings for the various magazine features indicated the highest percentage of "like" choices for the stories (78%), closely followed by the games and pictures (77% and 76%, respectively). Many fewer students stated they "liked" the vocabulary or variety (55% and 44%, respectively). Twenty-three students said they "disliked" the variety, and 28 said they "neither disliked nor liked it"; the parallel figures for vocabulary were eight "dislike" and 20 neutral responses. These rankings were consistent across classes, with the 6th-grade students again being relatively more positive in their reactions.

In noting differences between this magazine and their other school materials, the inclusion of animal stories and the use of Spanish were mentioned most (by 16% and 14%, respectively, for the total sample)--the former primarily by the 5th grade and the latter by the two other classes. The pictures, stories, information, and ease of reading also were mentioned as distinctive features by several students. As one articulate 6th-grade student responded, "the fact that it was in Spanish, the stories were nice, and the photos looked or appeared real." A third of the combined 5th- and 6th-grade group, however, listed non-specific or vague differences that largely accounted for the highest percentage of responses (21%) being in the "other" category. The specific responses in this category typically referred to physical features of the magazine such as its letter type and soft cover.

Given their generally favorable response to the magazine, 85% of the students said they wanted to continue receiving Ranger Rick's magazine, with only nine students who said they did not, and four who said they did not care either way. Most students (58%) preferred to have future issues in both Spanish and English, with only 19% and 6% preferring it in Spanish or English only, respectively. Also, 56% said they preferred to use it in school, although slightly more than a third (35%) reportedly preferred to use it at home. Two 6th graders noted that using it in the home would help familiarize the family with it and also enable them to study it more. These overall main findings were consistent across classes, but there was variation in the extent to which secondary choices were made. For example, ten of the eighteen students who preferred to receive the magazine in Spanish were in the 6th grade which, as was reported earlier, generally found the Spanish in the magazine easy. Also, unlike students in the 5th- and 6th-grade classes who expressed an almost equal preference for using the magazine at home as at school, the combined 5th- and 6th-grade group preferred the home location considerably less.

In addition to their desire to continue receiving the magazine, at least five students recommended its future use at every grade level from kindergarten through eighth grade. The most recommendations were made for the sample grade levels; the 6th grade was recommended by 44% of the sample and the 5th grade by 41%. The next grade level most frequently checked (by 39%) was the 4th grade, primarily due to the fact that the 6th-grade students selected this grade level most often rather than their own grade level as was done by the two other classes. Perhaps this, too, reflects their generally finding the magazine very easy to read.

Only 22 students, or 23% of the sample, expressed any desire for changes in the magazine. Changing the hippopotamus picture or certain articles and adding more stories were specified by the 5th graders, whereas more activities and drawings were requested by the 6th graders. Only three students in the combined 5th- and 6th-grade group requested any changes, and of these, only one specified its nature--to change the Spanish to English.

Most of the students wrote additional comments after completing the questionnaire. All classes commented on enjoying the magazine, its good stories and pictures, its attractiveness, and the amount of information it contained. Some of the additional comments by the 5th graders were as follows: "The magazine should be available in all schools to learn to read"; "It is very good cause it talks about nature. There are few magazines of this type. I like the stories. Don't forget to make a film"; and "I showed it to my mother who said it was an important magazine made so I may learn more." In addition to commenting on the various articles they had enjoyed, several students in the combined 5th- and 6th-grade group noted that it was fun and easy to read (and thereby understand). Many of the 6th graders remarked on their desire to read it again and to receive more copies: "I liked it so much I read it again"; "I read it with friends and at times at home. Aside from being pretty, it provides us with information on animal life and prehistoric animals"; and "The magazine is pretty and easy. Would like to read it again because of its beautiful and interesting stories. It's fun to read." Some 6th-grade students also had additional suggestions to make: "The magazine has vast information on nature and scientific things. If you send it to Mexico, it could be used as a science book in the school"; and "It should be in both English and Spanish and should be expanded to accommodate more information." And one 6th-grade student expressed so well what we hope would occur with all instructional materials being used in school: "And I think that to use it (not) only for reading and for doing some of the things that the magazine says, but reading it with much enthusiasm and with a desire to learn and to know everything that happens around us, and perhaps when we are older we could be some of those people who study and research these things."

The School Questionnaire was completed by both the principal and an unidentified staff person. Both reported that the Ranger Rick magazine was currently not in the school. Although the principal had not read it before, the other individual had done so and enjoyed it somewhat. Both said they liked or liked very much the various features of the magazine. They both reported especially liking the interest level of the stories, and one respondent also liked very much the games. Although the principal did not mention anything liked least, the other staff member listed the vocabulary. Neither stated any changes they themselves desired, but the principal noted that the teachers had suggested the inclusion of sports features and the use of Spanish titles. One respondent had discussed with the students their reactions to the magazine and reported that they, too, had enjoyed it.

Given their favorable reactions to the magazine and the lack of any similar Spanish materials in the school, both recommended its continued use. The staff member recommended that it be used for Language Arts and Spanish with 4th-grade students and for Science in the 5th grade. The principal recommended its future use in 5th- and 6th-grade Language Arts and Social Studies classes. He/she viewed the Spanish edition as appropriate and interesting for dominant Spanish-speaking students and felt it would provide good supplemental material in bilingual classes.

Each of the teachers completed a Teacher Questionnaire. As will be learned in the following description, although the students were all either 5th or 6th graders, the magazine was used in diverse ways depending at least in part on differences in students' abilities and interests, the curriculum period in which it was introduced, and teachers' interests, skills, and teaching styles.

Both the 5th- and 6th-grade students were described as speaking Spanish "very well" and reading it "pretty well"; their Spanish writing skills varied, with the 5th-grade students rated as performing "somewhat," and the 6th graders as "pretty well." Students in the combined 5th- and 6th-grade class were rated as reading Spanish "very well" and speaking and writing it "pretty well." Most students in all three classes had very limited English skills. Both those in the 6th-grade and combined 5th- and 6th-grade classes were described as speaking, reading, and writing English "somewhat." The teacher of the 5th-grade students, however, described them as performing at different levels, with most speaking English "hardly at all" or "only somewhat," but ranging in their reading and writing skills from "hardly at all" to "pretty well."

For two of the classes the magazine was used during Spanish and Science periods; the third class used it during Science and Social Studies. One teacher reported spending 30 to 45 minutes using almost all the sections, but reading only a few; another used seven articles that were related to what the students were currently learning and read the other sections to them for a combined time of 46 to 60 minutes; and the third teacher spent 30 minutes daily for an unspecified period on each section, assisting the students' silent reading while he/she read aloud, and then asked questions leading to extensive discussion to check the students' fluency and comprehension. Except for this last teacher who reportedly translated a few words, no translation of the Spanish was done. Two of the teachers reported using the Activity Guide and both said they found it helpful.

These three teachers were extremely favorable in their reactions to the magazine. Two stated they liked the entire issue, that there was nothing they did not like. One especially liked the poems and the "Ranger Rick and His Friends" story; the other commented that the magazine was "very well written, the content was of high interest, and very few (3-4) had difficulty reading it." The third teacher liked most the pictures, but noted that what was liked least was that some of the words were too difficult for some students' reading level. This may be due in part to the fact that he/she taught the youngest group. Similarly, the first two teachers rated the various features as "appropriate" (or "very appropriate" for the pictures), and the third teacher rated the vocabulary as "somewhat inappropriate." The only suggested changes were the addition of more games and sports students have engaged in to help teach social skills. In a later comment, more attention to cultural factors was requested.

The students in all three classes were described as actively engaged when the magazine was used. The 5th-grade teacher commented, "They enjoyed reading a magazine in Spanish. They loved the dinosaurs and other stories of animals and liked reading about nature. Most of the girls, however, did not like some of the pictures." The teacher of the combined 5th and 6th graders said, "I could see the students enjoyed reading it and working with it. It was interesting to note that the students noted other words that meant the same thing as what they used." This same teacher described the class as challenged to seek out reference books and to read on their own. The 6th-grade teacher also reported that the students were motivated (by the dinosaur article) to look for more books in the library. In addition, they discussed their own experiences with solar energy and generally wanted to read more on the various topics. These events were also indicators to the teachers that their students had learned from the magazine. In specific response to the question as to whether they perceived their students as having learned from the experience, they replied that the students showed comprehension during discussion, that "they learned about nature," "they learned new words and concepts," and "they were challenged to learn more."

Although one teacher did not know if the English edition of Ranger Rick was available, another reported it was in the library, and the third said it was currently being used in the Science component. Only one of these teachers, however, had read it before and he/she had read it often and liked it a lot. They all indicated, however, the lack of similar Spanish materials in the school. Also, in describing how the magazine differed from the students' other instructional materials, two teachers said it was "very different" because, according to one, "The pictures explained and motivated them to learn and read," and to another, "The area is very limited as to museums and solar energy homes." The third teacher indicated that it was "somewhat different" and noted that the class does not have Science since ESL students spend so much time in Reading and English.

Given the enthusiasm that they and their students reportedly felt for the Spanish edition and the lack of similer materials, all three teachers recommended the magazine's further use. Their choice of grade levels and subject areas, however, differed. The 5th-grade teacher recommended it for 3rd-grade students in Language Arts, Science, and Spanish. The combined 5th- and 6th-grade teacher recommended it be used in grades 3 through 8 in Science and Spanish as well as for ESL classes. The 6th-grade teacher recommended it for 5th and 6th grade in all three listed areas. These three teachers concurred in viewing a Spanish edition of Ranger Rick as having potential educational value for both bilingual and ESL programs. ("Bilingual students learn correct Spanish words and sentence structure. It is a good way to practice reading in Spanish.") It was noted, however, that it might be good to have one story in English and one in Spanish, and also that the value of the magazine in its present form would depend on the students' reading level. In responding to its potential value for ESL students, these teachers commented that it would be useful as an introduction to science, would help students learn new words to add to their vocabulary, and would be "excellent because their Spanish skills are well developed."

Thus, in a large elementary school serving a student population comprised almost entirely of Hispanic youth and whose rural location near the Mexican border makes it likely that new entrants from Mexico arrive each school year at all grade levels, a Spanish edition of Ranger Rick's Nature Magazine was enthusiastically received by students and teaching staff. For the youngest students and others limited in reading Spanish, the need for a broader vocabulary range seemed indicated, however. The varied uses of the magazine in the different classes demonstrated the wide utility of the magazine and the staff's and students' comments showed its value for increasing students' motivation to learn in general and their need and interest for learning about science areas in particular.

Three Texas sites participated--a rapidly growing urban area, a small rural community, and a town on the Mexico border. In all three sites the study sample included students of Mexican origin who were enrolled in bilingual or ESL programs, who varied in their Spanish and English competencies, and whose families were long-term residents or new arrivals. Although students and staff generally enjoyed the magazine, there were mixed reactions on continuing the Spanish edition of Ranger Rick's Nature Magazine in its present form. For many of these youngsters the Spanish vocabulary in the present issue was much too difficult. Most of the students could speak and orally comprehend Spanish, but many were very limited in reading Spanish. Some of them were generally limited in both reading Spanish and English, whereas others were much more proficient in English. For the older elementary students in bilingual classes and those Mexican Nationals proficient in Spanish, the magazine proved appropriate, useful, and enjoyable. Moreover, the need for Spanish science materials for these students was not being met and the magazine helped provide such information as well as motivating the students in other academic areas.

CONCLUSIONS

As was noted in the Introduction, this study attempted to: (a) determine the acceptability and use of a Spanish edition of Ranger Rick's Nature Magazine and companion Activity Guide; (b) identify the extent to which diverse groups within the Hispanic community react differently to the edition; (c) assess and analyze the extent to which the edition's content, reading level, format, and so on are appropriate for the intended audiences; and (d) collect and analyze recommendations from the field-test populations for the Spanish edition program materials and services. In this chapter are described the conclusions from our findings regarding the first three goals in the order they are listed above; findings relating to the recommendations are included in the discussion of the other three as relevant. The chapter closes with implications for further study.

The following conclusions and recommendations are based on a large nationwide sample of students that varied on the following characteristics: Hispanic origin (Mexican American, Puerto Rican, and Cuban),[3] type of community (urban, suburban, small town, and rural), family socioeconomic status, grade level (four through eight), and level of Spanish and English proficiency. Information also was provided by school administrative and teaching staff. Questionnaire data were received from seven states, 17 sites, 51 schools, 119 classes, and 2,734 students.[4] Most of the students in the sample were enrolled in bilingual classes, but a considerable number were attending ESL or transitional classes and there were a few instances of the magazine being used with students in regular school programs. Site visits also were included in this pilot study to explore in greater depth student and staff reactions and to assess the physical and social context in which these responses were given. Since only a small sample of schools could be visited, particular attention was given to the representativeness of this subsample. Selection criteria included the major design factors--Hispanic origin, geographical region, population density and grade level. Thus, 25 classrooms in 16 schools at eight sites were visited and 16 other teachers were interviewed alone in addition to principals, bilingual coordinators, and resource teachers to provide greater insight into the questionnaire responses obtained.

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[3] Some Hispanic students from the Caribbean and from Central and South America were included in the samples from Chicago, Miami, and San Francisco.

[4] Several additional classes participated, but their questionnaires either were not received or arrived too late for inclusion in this report.

The April 1980 edition of Ranger Rick's Nature Magazine was translated into Spanish and reviewed for vocabulary and language usage by native Spanish speakers from Mexican and Puerto Rican backgrounds. It was sent along with an Activity Guide in both English and Spanish to schools that agreed to participate in the study. School staff were instructed to use the magazine for one class period and to complete the questionnaires a week later. There was no specific directive on how the materials were to be used so that teachers and school administrators would be free to incorporate the magazine and suggested activities into their class work in ways most likely to achieve their own instructional goals.

As might be expected in a pilot study, emphasis was placed on a qualitative or case study approach rather than heavy reliance on quantitative methods. This approach accommodates the richness and variety of student, school, and site characteristics and permits better understanding of the realities of education for students with limited English language ability. The case study approach also facilitates the generation of an array of educational outcome hypotheses and permits the identification of those that appear most promising for more extensive study.

The conclusions presented here are generalized across all sites and sample characteristics. The concluding section in each site report in the Results chapter gives reactions of the school personnel to the magazine, their recommendations and comments on the educational potential of Ranger Rick as it relates to their students and school. Many of the students' comments also are included in the description of the questionnaire findings. The reader is directed to this information for an understanding of the variety of uses and values represented in this study.

Acceptability and Use

The findings indicated the generally high acceptability of the magazine by both students and staff. The content, format, and translation were generally regarded as of exceptionally high quality; the majority of students in every site liked the magazine and wanted to continue receiving it. Based on their responses, using an issue that included articles on dinosaurs was an obvious "plus" for the students. The excellent detailed and colorful photographs were considered the highlight by both staff and students. The "April Foolers" photographs and those of the hedgehogs were frequently rejected, however, suggesting some caution in how such pictures are presented. Although some sex-typing was suggested, with girls more often stating a dislike for "those ugly pictures," there were a number of children, particularly the youngest, who remarked on not liking them because they frightened them, and these fears might have interfered with their acquiring the information associated with the pictures. To avoid such reactions, perhaps teachers might be provided with advice on how such pictures can be effectively introduced and explained. Similarly, one student mentioned not liking dinosaur bones because "I was frightened for I thought we, too, had bones with tunnels in them." Such a response reminds us how important it is to encourage students to verbalize their thoughts and feelings so we can clarify misconceptions and reduce fears.

Although students generally listed the dinosaur articles and pictures as what they liked best, almost every article or feature typically was mentioned by someone in every site. Many fewer students listed anything they liked least. As noted above, the "April Foolers" and hedgehog photographs were mentioned most often. Sometimes the same article was mentioned as liked most and least by students in the same class--and even by the same student because of a particular detail or section. Of course, what was liked (or disliked) was limited to what was presented if the students did not read further on their own. Also, students and teachers often reported similar likes and/or dislikes, but the nature and direction of causality is unknown.

In every site, however, most students expressed their enjoyment with the magazine, especially the colorful pictures, interesting stories, the inclusion of games and activities, and the many new things to learn. With the exception of two classes, all teachers reported their students were actively engaged when the magazine was used. The following quotes exemplify the enjoyment these students experienced: "At the same time I was learning I was having a lot of fun"; and "I wish this book was not the only pretty book there is." An inner-city 4th grader commented, "When I read this book, I felt like I was playing in the park. I enjoyed it a lot"; and two older youths in a small rural community stated, "I think this magazine has to be printed because it's the only one in Spanish" and "It seemed very interesting because it taught things I didn't even imagine existed and I think it's very useful."

In several classes both students and teachers commented on the desirability of including articles that referred to their local experiences (e.g., stories about desert animals in the Imperial Valley area and about Mexican children). Thus, it is recommended that in planning future issues attention be paid to including over the year articles of specific relevance for different groups. Not only should this increase students' interest and enthusiasm for the magazine and thereby increase their recognition of the relevance of science to their lives, but it also should facilitate their recognition and appreciation for the breadth of opportunities in the sciences. A potential additional social benefit would be the insight into the lives and experiences of others. A few children suggested that there be more stories and illustrations related to school. Although not specifically mentioned by anyone in the present sample, I would recommend that these and other articles include pictures of children from diverse ethnic backgrounds--both to increase the magazine's relevance to the user and to expand students' knowledge and awareness of their communalities with other people. To increase the magazine's usefulness, one teacher also recommended that future issues include addresses where students could obtain further information on the topics presented.

Overall, more students preferred to have both Spanish and English versions of the magazine available, perhaps in part reflecting the school's (and their family's) desire for them to learn English. Also, most students stated they preferred to use the magazine in school, although many expressed the desire to use it both at home and at school. Among the rationales most frequently given for choice of location were the following: "School because the teacher can explain more"; and "At home to have more time to read it and to share it with my family." Those students from the most economically disadvantaged families were more likely to say they wanted to use it in school "because the teacher can help us."

The limited information on the usefulness of the Activity Guide probably reflects more the fact that the study required only a very limited time with the magazine (one class period) rather than the quality of the Guide itself. For those few teachers who are continuing to use the magazine in their classrooms, the Guide appears to be quite helpful. Two of the few recommended changes in it were the use of more activities that could be done in the classroom itself and ones that could be done independently by the student. One teacher also commented that attention should be paid to making activities appropriate for both urban and rural and wealthy and poor school districts. Teachers also suggested including in the magazine itself a few activities and thought-provoking questions at the end of at least some of the articles to assess and reinforce the students' comprehension and learning of new vocabulary.

The magazine was found useful in bilingual, ESL, and transitional classes in Science, Language Arts, Spanish, and Social Studies as well as in regular Science and Spanish classes. Some classes used only one article, whereas others reportedly used the entire magazine. Given differences in the way the magazine was used, the number of articles used was only slightly related to the amount of time spent. The actual manner in which the magazine was used depended in part on the teacher's teaching style, current curriculum objectives, scheduling pressures, and students' (and teachers') fluency in Spanish. What and how it was used also depended in part upon who was coordinating the study in a particular school. In some classes the magazine was readily integrated into current lessons; in others it was used during a very distinct separate session. In some classes the teachers and/or students read the articles aloud and discussed their meaning; in other classes students read on their own. Many teachers used the magazine for more than one class period. Some teachers were very creative in using it across a wide range of subject areas and several commented that there was so much in one issue they could use it for several weeks or months. Many classes included follow-up activities such as writing compositions, illustrating story features, visiting museums, doing further library research, building the carton dinosaur or solar home models, having later discussions (and sometimes tests) of what was read, and, in a predominantly non-Spanish-speaking class, learning how to speak and read Spanish. Other teachers left further use to the students' discretion, and many students were described as reading the magazine during lunch and other free periods as well as at home and taking books out of the library on related topics.

Many students also reported discussing the magazine with their families and/or friends. This generally occurred most often with students in the younger grades, perhaps in part due to the typical more limited discussion about school activities between preadolescents and their families. A number of students (and staff) commented on the parents' (and sometimes grandparents') enjoyment with the issue. For some Hispanic families it was one of the few materials their children brought home from school that they also could read and enjoy. More of this probably would have occurred if in some schools the materials had not been kept in the classroom despite our statement that each student was to be given one for his or her own use.

There can be no discussion of the usefulness of instructional materials without noting the teacher's contribution to their effectiveness. In reading the questionnaires and interviewing teachers and students during the site visits, the variability within schools and sites was striking. Teachers within the same school differed in what they used, how they used it, the extent of their involvement in the study, and how valuable they perceived the experience. The interested active teacher is more likely to have interested active learners. A striking example of this occurred in those classes in which most of the students had very limited Spanish reading skills. In some of these classes, both students and teachers were highly frustrated and negative, whereas in other classes the magazine was used in such a way that the experience was a very rewarding one and the students wanted to continue using the magazine to learn more about animals and to learn to read and translate Spanish better. In any future use of the magazine there should be active teacher as well as administrator involvement in the selection and proposed use of the materials. In most sites this was the case since school administrators left the decision as to whether or not to participate and the use of the magazine to the individual class teachers.

Group Differences

An important issue was the extent to which findings differed by the participating school's location (geographical region and population density) and students' characteristics (Hispanic origin, age level, and Spanish competency). The variability within sites and the particular sociocultural context in a given site precluded obtaining significant differences between urban/suburban and small town/rural communities. Acceptance was highest, however, in those schools receiving the largest numbers of Hispanic students with limited English proficiency since the need for appropriate materials was greater.

The data indicated that it would be too simplistic to describe particular differences between Hispanic groups without recognizing the many confounding issues involved. Not only does Hispanic origin vary with geographic location, but within groups differences between urban and rural areas, the extent to which individuals are new entrants to the country versus established families educated in the United States, and variability in socioeconomic levels and Spanish and English proficiency are but some of the salient factors preventing such ethnic group comparisons to be made without serious errors. What the results did indicate, however, was that acceptance of the magazine was high in all ethnic groups represented.

Similarly, age is a static variable that tells one little about a student's developmental level or linguistic competence. The fact that older students were in a bilingual class often meant that either they had experienced difficulty in the lower grades learning English and were generally performing poorly academically or that they were new arrivals to the country with limited English proficiency and fluent to varying degrees in Spanish. The findings did indicate some age differences in story preferences and a greater expressed interest in conservation issues by the older group. These findings, however, may reflect teacher differences in what they chose to emphasize at different grade levels.

Differences in competence in the Spanish language did lead to different findings, but this will be discussed further in the next section on the magazine's appropriateness. It should be noted here, however, that being classified Hispanic does not tell how proficient a student is in the Spanish language nor does knowledge of proficiency in one mode of communication (e.g., speaking) necessarily indicate the level of proficiency in a different mode (reading or writing).

Appropriateness

Although most features of the magazine were considered appropriate for the participating students across grade levels, there were a considerable number of students and teachers who remarked on the level of difficulty of the vocabulary.

Most of the students in this study spoke Spanish in their homes and could orally comprehend it, but that did not mean they could read or write it. This was especially true for those Hispanic children who were not first generation in this country, but it was also true for students who came from very poorly educated families. Also, since many bilingual classes comprised students with a wide range of skill in reading Spanish, school personnel recommended that future issues include various reading levels as is common with other instructional materials used. Some school personnel suggested more idiomatic language, but this was not the typical response. Some bilingual teachers and coordinators expressed a definite preference for the more difficult vocabulary and formal Spanish structure as a desirable challenge for the students and "an opportunity to see their language correctly written." Responses to this issue would appear to depend also on the teacher's fluency in Spanish and his or her willingness to spend additional time translating or using more reference materials. Some teachers requested combined English and Spanish versions, whereas others directly opposed doing this in order to encourage students to look up words they did not know. Some optional degree of mismatch would seem beneficial as a challenge rather than frustration, but this would require a wider range of vocabulary levels in future issues.

All bilingual classes, however, are not the same. Some differ in the percentage of Hispanic students and the extent of heterogeneity influences the need for both English and Spanish editions. For example, one participating class in Los Angeles served a mixed group of Asian and Hispanic limited English-speaking students. The teacher requested that both English and Spanish issues be available in order to teach all the students at the same time. Also, some teachers in classes with large numbers of non-Spanish-speaking students recommended having both versions available to facilitate two learning activities: each student could use the version in his or her primary language and could develop skills in the other language. In any case, as suggested by several teachers, a glossary of particularly difficult words or scientific terms might be a useful appendix. A set of new words might also be placed at the beginning of an article and, as was done in several classes, the teacher might use them in prior preparatory exercises. Several teachers (and a few students) noted that future issues should not use English names in a Spanish text since they are meaningless, hard to pronounce, and slow down reading.

Similarly, for some classes, some of the story topics were considered too difficult and/or too unfamiliar. This results in part from using the same magazine for a wide range of grade levels. Older students, for example, were more likely to prefer the articles on solar energy and diatoms. But again this may have reflected the teacher's level of interest and/or expertise, especially given the fact that typically in bilingual classes science was being taught by teachers whose area of expertise was not science. Many students, however, expressed their pleasure in having the opportunity to learn about unfamiliar animals and facts. The games also received some mixed reaction. Some students found the vocabulary and instructions too difficult to understand, whereas others wanted more and a greater variety, such as riddles and crossword puzzles. Many students, however, in differentiating this issue of Ranger Rick from their usual school materials, noted that it explained things better and was easier to understand. They often remarked that the pictures helped teach things better.

No school indicated the present use of similar materials in Spanish. Particular mention was made of the fact that many of the bilingual classes participating in this study did not offer science in the curriculum, and when it was offered, the school often had to rely on poorly produced and noncurrent information. Teachers in different parts of the country noted that it was difficult to find interesting, enjoyable Spanish materials without going out of the country. Spanish science materials were reportedly essentially nonexistent. Without such materials available, it would be unreasonable to expect that there would be an increase in the number of Hispanic students who are competent and interested in science areas.

Continued production of a Spanish edition of Ranger Rick was strongly recommended by most participants, particularly with some adaptation in vocabulary levels. And it is important to note that its usefulness was not viewed as confined to Science, but also for Language Arts, Reading, Spanish, and Social Studies. Although some teachers recommended it solely for their own grade level and subject area, most of them recommended that it be used for several grade levels and subject areas. Additional uses suggested were for teaching Spanish as a second language and as a resource in the school library. Also, students across grade levels enjoyed it, although differences in preferences for particular articles and/or features were noted. For example, the older students not only preferred the solar energy article, but they were more likely to point out that the magazine was more interesting and entertaining than their usual school materials. We must heed, however, the fact that many schools still concentrate their bilingual programs in the primary grades. This suggests, therefore, the inclusion in every issue of material appropriate for these lower grade levels or a separate edition.

Overall, there was a strongly favorable reaction as to the potential educational value of a Spanish edition for bilingual classes (with some modification in the vocabulary level). Not only were its reinforcement and enrichment possibilities for the curriculum noted, but also the affective and social consequences of having high quality, up-to-date Spanish materials for increasing students' motivation for school, especially in the science areas, and their pride in their Spanish culture. In some classes the students "discovered" the utility of the Spanish language in classroom learning, and the teachers expressed their pleasure in Ranger Rick's role in making this possible.

There were many fewer ESL students in the sample. Conflicting staff recommendations in this program make any generalizations highly questionable. For some school staff, a Spanish edition (usually with an accompanying English one) was viewed as very useful as an introduction to science, as an aid for learning new vocabulary, and "excellent because their Spanish skills are well developed." Often the magazine provided these students with enjoyable instructive material for their free reading periods. Others, however, expressed a very negative reaction, perceiving the additional use of Spanish materials as conflicting with their educational philosophy. But as one bilingual coordinator noted, the ESL students are the ones most likely to be missing science as a consequence of their being pulled out of their regular classes for special language instruction. Also, the ESL classes in this study often comprised older students who were at least as favorable in their reactions to the magazine and their desire for its continued use as were the younger students. In addition, several teachers pointed out the limited amount of good reading and science materials for monolingual Spanish-speaking students in the upper grades.

Many sociopolitical issues affect the choice and use of teaching materials. Also, as the site visits indicated, the sociocultural context in which instruction takes place must be considered in assessing educational outcomes. In locating the sample schools and in interviewing teachers, differing views on bilingual education were highly manifest. One school principal administering a school not more than 15 miles from the Mexican border gave as his/her reason for refusing to participate, "Foreign materials are not allowed in our schools." For other nonparticipants, agreement to participate in a study above third grade was viewed as admitting failure of their bilingual program in the earlier grades. In some of the participating schools, staff made clear they did not have a maintenance program, and supplementary Spanish materials were appropriate only for monolingual Spanish students. In others--often in the same site--staff strongly expressed the desire for a maintenance program, while noting that this was not the present administrative policy. Teachers in those classes with students highly fluent and literate in Spanish viewed the emphasis on changing them from a Spanish monolingual group to an English monolingual group as especially unfortunate, since their literacy level suggested the ease these students would have in learning English while still maintaining their Spanish skills. For many of these students who live in areas where they are likely to continue to interact frequently both personally and in their later jobs with Spanish-speaking people, maintenance of their first language seems particularly advantageous. A Spanish edition of Ranger Rick would provide both a pleasurable and informative way to maintain these Spanish language skills.

Given the students' brief exposure to the magazine in this pilot study it seemed inappropriate to evaluate specific learning outcomes. Almost all teachers, however, reported their students had learned from the experience--as evidenced by their comprehension and recall of facts in class discussions, their relating of articles to personal experiences, their learning of new words and concepts and how to use dictionaries and other reference materials, and so forth. Many mentioned that their students were motivated to learn more about the topics presented. They also noted that the pictures helped explain concepts and motivated them to learn and to read. Although some students in response to being asked what they had learned gave only vague answers or minimal naming of story titles or topics, others listed numerous story facts and stated they had learned new words, how to read and translate Spanish better, to appreciate nature more, and to care for animals and conserve natural resources. A common response was, "I learned many interesting things I never knew before." Many commented that reading the magazine made them want to learn more. Without further follow-up activities and reinforcement of what was learned, however, such learning may be very transitory. Also, the extent to which the positive findings are due to novelty is unknown. The present study suggests the value of conducting a long-term study to evaluate the impact of expanded use of a Spanish edition of Ranger Rick's Nature Magazine on both knowledge about and attitudes toward science areas. Such a study would provide school staff more preparation time to integrate the magazine into the curriculum to meet particular educational objectives. The data also suggest that such an evaluation include assessment of progress in the students' general reading achievement as well as in their attitudes toward school and learning in general. Of course, what is learned depends on both the students' abilities and past experiences, and the quality of instruction. Thus, information on these variables also should be examined.

As noted earlier, there was considerable variability in the results within and between schools in a given site. The site visit interviews provided some insight into understanding these differences, but a more intensive and extensive study would enable one to determine those characteristics of students, teachers, and administrators as well as the broader social context that are associated with differential cognitive, affective, and social outcomes.

In summary, a Spanish edition of Ranger Rick's Nature Magazine was generally enthusiastically received by students and school administrative and teaching staff. For the youngest students and others limited in reading Spanish, the need for a broader vocabulary range, however, seemed indicated. The varied uses of the magazine in the different classes demonstrated the wide utility of the magazine and the staffs' and students' comments showed its value for increasing students' motivation to learn in general and their need and interest for learning about science areas in particular. For the older elementary students in bilingual classes and those new arrivals to the country proficient in Spanish, the magazine proved appropriate, useful, and enjoyable. Moreover, the need for Spanish science materials for these students was not being met and the magazine helped provide such information as well as motivating the students in other academic areas.

Despite the fact that this was a pilot study--a relatively brief experience restricted to one issue to serve a broad range of children and youth--the findings definitely indicated that the approach represented by a Spanish edition of Ranger Rick has merit, can serve a variety of pressing educational needs, and ought to be pursued further. Most important, the findings indicated the tremendous need for science materials for Hispanic students with limited English proficiency. If we want to increase these students' appreciation for and understanding of science and provide equity in opportunity for careers in science, we must provide more and varied modes of instruction. With some adaptation, a Spanish edition of Ranger Rick may provide one such alternative for students in a particularly important period in their schooling. For many students the attractive format and interesting content encouraged them to read and to want to read more. Such motivation is a necessary precursor to acquiring information and understanding. Also, many of these students are finding school a difficult situation with which to cope. The present study suggested that materials such as these can contribute to the students' more positive attitudes toward school and feelings of success.

We do not know the extent to which the very favorable reactions obtained were due to the fact that the sample was a voluntary one. However, this would be true of many special instructional materials used. Also, despite the anonymity provided, students (and staff) may have felt pressured to various degrees to respond positively. Nevertheless, the specificity of many responses suggested that these positive responses were genuine. The teachers' responses to the open-ended questions on the educational value and potential use of a Spanish edition of Ranger Rick summarize best their feelings as well as providing additional information. In response to its educational value, a cross-section of teachers said: "I'd like to see this magazine, the Spanish edition, used as part of the science program. Facts are presented in such an interesting and attractive fashion that students seem to be more motivated and eager to read or have the stories read to them"; "It broadens children's knowledge in wildlife which these inner-city children are not exposed to in language familiar to them. It serves as enrichment activity in addition to a regular reading program. It encourages these children whose language is mainly Spanish to want to read such a well-edited and interesting, as well as beautifully illustrated, magazine as Ranger Rick which I personally found a pleasure to read"; "The Spanish edition of Ranger Rick is of great educational value. It presents information in an attractive and appealing manner. The Spanish edition provides the occasional alternative from the day-to-day use of the developmental reader. It also sheds an attractive light on the Spanish language. (If a nice magazine like Ranger Rick is written in Spanish, then Spanish is a worthwhile language to know.)"; and "The children are exposed to very few magazines and newspapers that are written in Spanish. A magazine of Ranger Rick's caliber can be used to reinforce that which has been taught previously in terms of content, vocabulary, and general reading skills as well as to introduce new concepts, especially those relating to science and nature."

In response to its potential value for bilingual programs, the magazine was recommended for supplementary reading and enrichment. To quote from some of the questionnaires: "Excellent magazine! Well translated!"; "From the available material on the market being translated into Spanish, it appears yours is the best I've come across"; "I think using the Spanish edition is most beneficial to any bilingual program in many respects. Primarily the children are exposed to a Spanish language edition of a well-known magazine. The children can see Spanish in a context which they are familiar with--that is, an informative children's magazine. They can see that Spanish is not only a language to be read and spoken, but a vehicle for information. A magazine like Ranger Rick promotes a positive attitude towards Spanish which is essential in any bilingual education program"; (In a final comment this same teacher noted, "Enjoyed using; hope it will be available. It is important that the children be exposed to magazines, nature, their native language and a host of other things. Ranger Rick combines all these"); "It is motivating and interesting and also being in Spanish, the students' home language, they are able to enjoy them more while getting the most out of them academically"; "Ease of reading, appropriateness of materials, themes children like, and fantastic pictures"; "I think this could be an excellent tool. For one thing, it really created an interest in learning and improving Spanish. It is excellent as far as learning new things in science; also for vocabulary building, listening and oral language skills"; "It is a high quality, high interest magazine with intellectual content that can be used to develop the reading and thinking skills of the students. It can provide supplementary reading and science for bilingual programs"; and "First of all it would give the bilingual classes a booster because it would give those classes an opportunity to read in Spanish. Secondly, it would give our recent immigrants from Mexico a chance to begin and relate to our educational system because of the fact there are few materials in Spanish." Yet as one teacher remarked, "I think the fact that it is in Spanish is not the best of it. It is the educational content presented in an enjoyable way that makes it such a good magazine."

In conclusion, one 6th-grade student expressed so well what we hope would occur with all instructional materials being used in school: "And I think that to use it (not) only for reading and for doing some of the things that the magazine says, but reading it with much enthusiasm and with a desire to learn and to know everything that happens around us, and perhaps when we are older we could be some of those people who study and research these things." We must devote our resources to developing more and better materials that will facilitate not only such hopes but their accomplishment. The present study indicated that a Spanish edition of Ranger Rick has considerable potential value, especially given able creative teachers and enthusiastic administrative support.

APPENDIX A

Data Collection Instruments

1. Ranger Rick School Sample Description
2. Ranger Rick School Questionnaire
3. Ranger Rick Student Questionnaire
   (Spanish and English)
4. Ranger Rick Teacher Questionnaire

RANGER RICK SCHOOL SAMPLE DESCRIPTION

Date:____________________

School Name:____

School Address:____
(Street/P.O. Box)

____
(City/Town) (State) (Zip Code)

School Composition (Circle all that apply.)

Pre-K K 1 2 3 4 5 6 7 8 9 10 11 12

1. How many students are enrolled?__________

2. What percentage of these students are Hispanic?__________

3. In general, how well do the students in this school perform on standardized reading achievement tests?

    ____a. At 1 or more grade levels higher?

    ____b. At 1/2 to 1 grade level higher?

    ____c. At grade level?

    ____d. At 1/2 to 1 grade level lower?

    ____e. At 1 or more grade levels lower?

4. Please indicate the approximate percentage of Hispanic students in your school who live in families where the head of household is employed as follows:

    ____a. Professional/Managerial

    ____b. Clerical/Sales

    ____c. Skilled Labor

    ____d. Unskilled Nonfarm Labor

    ____e. Farm Labor

    ____f. Unemployed

(Over)

5. Please describe the classes to be included in the Ranger Rick Study by filling in the appropriate boxes.

	No. Students	Grade								Program			
		4	5	6	7	8	5-6	7-8	Other (Specify)	Bilingual	ESL	Transition	Other (Specify)
a. Class 1													
b. Class 2													
c. Class 3													
d. Class 4													
e. Class 5													
f. Class 6													
g. Class 7													
h. Class 8													

To whom should materials be sent?

Name

Title

Address (Street)

(City) (State) (Zip Code)

Phone

How many Student Questionnaires in Spanish? ______

How many Student Questionnaires in English? ______

RANGER RICK SCHOOL QUESTIONNAIRE

Date:______________________________

School Name:____

School Address:____
(City/Town) (State) (Zip Code)

Your school role: (Check all that apply.):

___Principal ___Teacher ___Parent ___Bilingual Advisory Committee

___Curriculum Coordinator ___Other (Please specify.)______________________________

____

1a. Is Ranger Rick in English currently being used in this school?

___1. Yes

b. In what ways?

___2. No (Skip to
___3. Don't know question 2.)

2a. Have you read Ranger Rick before?

___1. Yes

___2. No (Skip to question 3.)

b. Where? (Check all that apply.)

___1. Home
___2. School
___3. Other (Please specify.)

____

____

c. How often?

___1. Once
___2. 2-4 times
___3. 5 or more times

d. Did you like it?

___1. Not at all
___2. Hardly at all
___3. Didn't like or dislike it
___4. Liked it a little
___5. Liked it a lot

3. Please comment on your perception of the educational value of a Spanish edition of Ranger Rick for your school's students:

4. How did you feel about the following aspects of this issue?

	Disliked very much	Disliked	Didn't like or dislike	Liked	Liked very much
A. Vocabulary level					
B. Variety of topics					
C. Interest level of stories					
D. Games/activities					
E. Pictures					

5. What did you like most about this issue?

6. What did you like least?

7. What changes would you like to see in any future issues?

8a. Have you discussed this issue with any students in the school?

___1. Yes

___2. No (Skip to question 9.)

b. How did they like it?

___1. Not at all
___2. Hardly at all
___3. Didn't like or dislike i
___4. Liked it
___5. Liked it very much

9a. Are there similar materials in Spanish now being used in the school?

___1. Yes

___2. No (Skip to question 10)
___3. Don't know

b. What are they?

____
____
____

c. How does this issue compare for your students? You might comment for example, on such aspects as usefulness, appropriateness, appeal and so on.

____
____
____

10. Please comment on the potential for using a Spanish edition of Ranger Rick in current school programs:

a. Bilingual______________________________
____
____

b. ESL______________________________
____
____

c. Other (Please specify.)______________________________
____
____

11a. After reviewing this experience, would you like the school to continue using Spanish editions of Ranger Rick?

1. ___Yes

b. In what courses and at what grade levels. (Check all that apply):

	Kgn	1	2	3	4	5	6	7	8
1. Language Art/ Reading									
2. Science									
3. Spanish									
4. Other - Please specify									

2. ___No
3. ___Don't know

Any additional comments or suggestions you would like to make would be very much appreciated. Please note them in the space below.

THANK YOU VERY MUCH FOR YOUR COOPERATION!

RANGER RICK

CUESTIONARIO PARA EL ESTUDIANTE

Fecha________________

Nombre de la Escuela:____

Dirección:____
(Ciudad/Pueblo) (Estado) (Zip Code)

Grado Escolar del Alumno: 4 5 6 7 8 (Circula uno)   Sexo: ___Masculino ___Femenino

1a. ¿Has leído la Revista Ranger Rick en inglés?

___1. Sí

___2. No (Pasa a la pregunta 2.)

b. ¿Dónde? (Indica todos los que se apliquen.)

___1. Casa
___2. Escuela
___3. Otro (Especifica por favor.)

c. ¿Cuán (Qué tan) a menudo?

___1. Una vez
___2. Dos a cuatro veces
___3. Cinco a más veces

d. ¿Cómo te gustó?

___1. No me gustó
___2. Ni me gustó ni me disgustó
___3. Me gustó

2. ¿Hablas español en casa?

___1. Sí
___2. No

3. ¿Cuán (Qué tan) bien lees el español?

___1. Nada
___2. Un poco
___3. Bastante bien
___4. Muy bien

4. ¿Cuán (Qué tan) difícil fue el español para ti?

___1. Difícil
___2. Ni difícil ni fácil
___3. Fácil

5. ¿Te leyó el maestro la revista en español?

___1. Sí
___2. No

6a. ¿Tradujo la maestra las palabras de español a inglés?

___1. Sí

___2. No (Pasa a la pregunta 7a.)

b. ¿Cuánto?

___1. Solamente pocas palabras
___2. Como la mitad de las palabras
___3. Casi todas las palabras
___4. Todo

7a. ¿Alguna parte o partes de la revista te causaron llevar a cabo otras actividades en la clase?

___1. Sí

___2. No (Pasa a la pregunta 8a.)

b. ¿Qué parte(s)?

____

____

____

c. ¿Qué actividades?

____

____

____

8a. ¿Alguna parte o partes de la revista te causaron hacer algo fuera de la escuela?

___1. Sí

___2. No (Pasa a la pregunta 9a.)

b. ¿Qué parte(s)?

____

____

____

c. ¿Qué hiciste?

____

____

____

9a. ¿Discutiste alguna parte o partes de la revista con tu familia o amigos?

___1. Sí

___2. No (Pasa a la pregunta 10.)

b. ¿Qué parte(s)?

____

____

____

10. ¿Qué fue lo que aprendiste de la Revista Ranger Rick?

____

____

____

____

11. ¿Qué fue lo que más te gustó de esta edición?

12. ¿Qué fue lo que menos te gustó?

13. ¿Cómo te sentiste acerca de las siguientes cosas de la revista? Marca el cuadro que creas que mejor describe cómo te sentiste acerca de cada una de estas cosas.

	Me disgustó	Ni me gustó ni me disgustó	Me gustó
a. El Vocabulario			
b. La Variedad			
c. Las Historias			
d. Los Juegos/Las Actividades			
e. Las Fotografías			

14. ¿En qué manera es esta revista diferente a otros materiales escolares?

15a. ¿Te gustaría seguir usando la Revista Ranger Rick?

___1. Sí

___2. No
___3. No me interesa

(Pasa a la pregunta 16a.)

b. ¿Te gustaría en inglés o español?

___1. Español
___2. Inglés
___3. Los dos español e inglés
___4. No sé

c. ¿En dónde te gustaría usar más la revista? (Marca todos los que se apliquen.)

___1. En casa
___2. En la escuela
___3. En otros lugares
(Especifica por favor.)

____

____

____

16a. ¿Te gustaría cambiar algo de esta revista?

___1. Sí

___2. No (Pasa a la pregunta 17.)

b. ¿Cuáles serían los cambios?

____

____

____

____

17. ¿En qué grados piensas que la edición en español de Ranger Rick debería de usarse? (Indica todos los que se apliquen.)

___1. Kindergarten
___2. Grado 1
___3. Grado 2
___4. Grado 3
___5. Grado 4

___6. Grado 5
___7. Grado 6
___8. Grado 7
___9. Grado 8

Por favor escribe cualquier comentario que desees que nos indique cómo has usado la Revista Ranger Rick's y qué piensas de ella.

¡MUCHAS GRACIAS POR TU COOPERACION!

RANGER RICK STUDENT QUESTIONNAIRE

Date:________________________

School Name:____

School Address:____
(City/Town) (State) (Zip Code)

Student Grade (Circle One.): 4 5 6 7 8 Sex: ___Male ___Female

1a. Have you ever read the Ranger Rick magazine in English?

___1. Yes

___2. No (Skip to Question 2.)

b. Where? (Check all that apply.)

___1. Home
___2. School
___3. Other (Please specify.)

____

____

c. How often?

___1. Once
___2. Two to four times
___3. Five or more times

d. How did you like it?

___1. I didn't like it
___2. I didn't like or dislike it
___3. I liked it

2. Do you speak Spanish at home?

___1. Yes
___2. No

3. How well do you read Spanish?

___1. Not at all
___2. A little bit
___3. Pretty well
___4. Very well

4. How difficult was the Spanish for you?

___1. Difficult
___2. Neither difficult nor easy
___3. Easy

5. Did the teacher read the magazine to you in Spanish?

___1. Yes
___2. No

6a. Did the teacher translate the Spanish words into English?

___1. Yes

___2. No (Skip to Question 7a.)

b. How much?

___1. Only a few words
___2. About half the words
___3. Most of the words
___4. All of it

7a. Did any part or parts of the magazine lead to doing some other activities in class?

___1. Yes

___2. No (Skip to Question 8a.)

b. What part(s)?

____
____
____

c. What activities?

____
____
____

8a. Did any part or parts of the magazine lead to your doing something outside of school?

___1. Yes

___2. No (Skip to Question 9a.)

b. What part(s)?

____
____
____

c. What did you do?

____
____
____

9a. Did you discuss any part or parts of the magazine with your family or friends?

___1. Yes

___2. No (Skip to Question 10.)

b. What part(s)?

____

____

____

10. What did you learn from the Ranger Rick magazine?

____

____

____

____

11. What did you like most about this issue?

____

____

____

____

12. What did you like least?

____

____

____

____

13. How did you feel about the following things in this magazine? Check the one box that best describes how you felt about each of these:

	Disliked	Didn't like or dislike	Liked
a. Vocabulary			
b. Variety of Topics			
c. Stories			
d. Games/Activities			
e. Pictures			

14. In what ways is this magazine different from your other school materials?

____

____

____

____

15a. Would you like to keep on using Ranger Rick?

___1. Yes

___2. No (Skip to
___3. I don't care Question 16a.)

b. Would you like it in Spanish or English?

___1. Spanish
___2. English
___3. Both Spanish and English
___4. Don't know

c. Where would you like to use the magazine?

___1. at home
___2. at school
___3. other places (Please specify.)

____

____

____

16a. Would you like to have the magazine changed in any way?

___1. Yes

___2. No (Skip to Question 17.)

b. What changes would you make?

____

____

____

17. For what grades do you think a Spanish edition of Ranger Rick should be used? (Check all that apply.)

___1. Kindergarten
___2. Grade 1
___3. Grade 2
___4. Grade 3
___5. Grade 4
___6. Grade 5
___7. Grade 6
___8. Grade 7
___9. Grade 8

Please write anything else you would like to tell us about how you used Ranger Rick's magazine and what you thought about it.

THANK YOU VERY MUCH FOR YOUR COOPERATION!

A-4

RANGER RICK TEACHER QUESTIONNAIRE

Date:____________________

School Name:____

School Address:____
(City/Town) (State) (Zip Code)

Your Position:____

1. Grade Level (Circle all that apply): 4 5 6 7 8

2. Course/Program in which the Spanish edition of Ranger Rick was used?

___1. Language Arts/Reading
___2. Science
___3. Spanish
___4. Other (Please specify.)____________________________

3. How many students were in the class?

___1. Less than 15
___2. 15-19
___3. 20-24
___4. 25-29
___5. 30-34
___6. More than 34

4. Were there more boys or girls?

___1. More boys
___2. More girls
___3. An equal number of boys and girls

5. What percentage of them are of Hispanic origin?

___1. Less than 25%
___2. 25-40%
___3. 41-55%
___4. 56-70%
___5. 71-85%
___6. 86-100%

6. What percentage of the Hispanic students speak Spanish at home?

___1. Less than 25%
___2. 25-40%
___3. 41-55%
___4. 56-70%
___5. 71-85%
___6. 86-100%

7. How fluent are the students in Spanish? Please estimate the percentage of the class at each ability level for each of the three skill areas:

	Hardly at all	Somewhat	Pretty well	Very well	Don't know
a. Speaking					
b. Reading					
c. Writing					

8. How fluent are they in English? Please estimate percentages at each ability level for each skill area:

	Hardly at all	Somewhat	Pretty well	Very well	Don't know
a. Speaking					
b. Reading					
c. Writing					

9. What percentage of these students are in a Bilingual or ESL program?

___1. Less than 25%
___2. 25-40%
___3. 41-55%
___4. 56-70%
___5. 71-85%
___6. 86-100%

10. How much time was spent in class on this Spanish edition of Ranger Rick?

___1. Less than 30 minutes
___2. 30-45 minutes
___3. 46-60 minutes
___4. 61-75 minutes
___5. 76-90 minutes
___6. More than 90 minutes

11. Please comment on your perception of the educational value of a Spanish edition of Ranger Rick for your school's students:

12. Please indicate what parts were used and if they were read to the students. Put a check mark in the appropriate space.

	Used	Read to Students
a. April Fooler	____	____
b. Search for Supersaurus	____	____
c. Backyard Dinosaurs	____	____
d. Build a Boxosaurus	____	____
e. Wise Old Owl	____	____
f. Ollie Otter's Fun Pages	____	____
g. Sense and Nonsense about Hedgehogs	____	____
h. Sea Poems	____	____
i. Ranger Rick & His Friends	____	____
j. Happy Bee	____	____
k. Nature Club News	____	____
l. Green Velvet Princess	____	____
m. Nature Did It First	____	____
n. Dear Ranger Rick	____	____
o. Ranger Rick's Rare Wonders	____	____
p. Diatoms	____	____
q. Piper Grows Up	____	____

13. What led you to use those particular parts?

14a. Did you have to translate any of the words into English?

___1. Yes

___2. No (Skip to Question 15.)

b. How often?

___Only a few words
___About half the words
___Most of the words
___All of the words

15. What did you like most about the issue?

16. What did you like least?

17. What changes would you like to see in any future Spanish editions of Ranger Rick's magazine?

18a. Did you use the Activity Guide?

___1. Yes

___2. No (Skip to Question 19.)

b. What did you use?

____

____

____

c. Did you find it helpful?

___1. Yes
___2. No

19. What changes would you like to see in the Activity Guide?

20. During the class session, did the students seem actively engaged in using Ranger Rick?

___1. Yes
___2. No

21. What did your students seem to like most in this issue? Please describe what led to this impression.

22. What did they seem to like least? Please describe what led to this impression.

23. How appropriate was the language level and content for most of the students in your class? (Please give a word or two in the appropriate box that explains your rating. For example, if you rate the vocabulary inappropriate, is it too easy, too difficult?)

	Very Appropriate	Appropriate	Somewhat Inappropriate	Very Inappropriate
a. Vocabulary				
b. Story Topics				
c. Games/Activities				
d. Pictures				

24a. Do you think your students learned something from this issue?

___1. Yes

___2. No (Skip to
___3. Don't know Question 25a.)

b. Please describe what you observed that indicated learning; e.g., recall of fact, application of information, and so on.

25a. To what extent was the information in this issue different from that which the students had already learned?

___1. Very different
___2. Somewhat different
___3. Very slightly different
___4. Not at all different

b. In what ways?

26a. Did you or any of your students use the magazine or Activity Guide following the class period?

___1. Yes

___2. No (Skip to Question 27a.)
___3. Don't know

b. Who?

___1. Students
___2. Teacher
___3. Both

c. In what (way)s?

____
____
____

27a. Are there similar materials in Spanish now being used in the school?

___1. Yes

___2. No (Skip to Question 28.)
___3. Don't know

b. What are they?

____
____
____

28. Please comment on the potential for using a Spanish edition of Ranger Rick in the school's current programs:

a. Bilingual______________________________
____
____

b. ESL______________________________
____
____

c. Other (please specify.)______________________________
____
____

29a. After reviewing this experience, would you like the school to continue using Spanish editions of Ranger Rick?

1. ___Yes

b. In what courses and at what grade levels. (Check all that apply):

	Kgn	1	2	3	4	5	6	7	8
1. Language Art/ Reading									
2. Science									
3. Spanish									
4. Other - Please specify									

2. ___No
3. ___Don't know

(Skip to Question 30a.)

30a. Is Ranger Rick in English currently in use at your school?

___1. Yes

b. In what ways?

____

____

___2. No
___3. Don't know

(Skip to Question 31a.)

31a. Had you read Ranger Rick before?

___1. Yes
___2. No

b. Where? (Check all that apply)

___1. Home
___2. School
___3. Other (Please specify.)

____

c. How often?

___1. Once
___2. Two to four times
___3. Five or more times

d. How did you like it?

___1. Not at all
___2. Hardly
___3. Didn't like or dislike it
___4. Liked it a little
___5. Liked it a lot

Any additional comments or suggestions you would like to make would be very much appreciated. Please note them below.

THANK YOU VERY MUCH FOR YOUR COOPERATION!

APPENDIX B

Detailed Sample Description

Detailed Sample Description by Site, School, and Grade Level

Site	Class Code	Grade	N
I. California			
A. Azusa			
School 1	A	7/8	11
School 2	A	7/8	16
Total			27
B. Calexico			
School 1	A	3/4	29
	B	4	21
	C	4/5	21
	D	5/6	17
School 2	A	3/4	27
	B	4	28
	C	5	26
	D	6	27
School 3	A	5	26
	B	6	29
	C	4	30
School 4	A	4	28
	B	5	30
	C	6	20
Total			359
C. Chula Vista			
School 1	A	5	28
	B	6	28
Total			56
D. El Centro			
School 1	A	5/6	33
	B	4	27
School 2	A	4	29
School 3	A	7/8	25
	B	7/8	21
	C	7/8	17
Total			152
I. California (Cont'd)			
E. Long Beach			
School 1	A	3/4	13
	B	6	12
	C	5	8
School 2	A	4/5	11
Total			44
F. Los Angeles			
School 1	A	4	20
	B	5	23
Total			43
G. San Francisco			
School 1	A	4/5	25
School 2	A	6-8	23
	B	6-8	25
	C	6-8	23
Total			96
H. San Gabriel			
School 1	A	7/8	21
School 2	A	4-6	19
Total			40
II. Florida			
A. Hialeah			
School 1	A	4	27
	B	5	19
Total			46
B. Miami			
School 1	A	4	17
	B	5	48
	C	6	41
School 2	A	6	22
	B	5	33
	C	4	23
	D	4	35
	E	5	25
	F	6	41
	G	5/6	30

Detailed Sample Description by Site, School, and Grade Level (Cont'd)

Site	Class Code	Grade	N
II. Florida (Cont'd)			
B. Miami (Cont'd)			
School 3	A	4/5	29
	B	6	45
Total			389
III. Illinois			
A. Chicago			
School 1	A	4	6
	B	5	4
	C	7/8	27
	D	4	9
	E	5/6	13
	F	4-8	16
School 2	A	3/4	25
	B	4-6	25
School 3	A	4/5	29
	B	5/6	28
	C	7/8	34
School 4	A	3/4	28
	B	3-5	32
	C	4-6	25
	D	4	28
	E	4/5	29
	F	5/6	28
School 5	A	4	34
	B	4/5	30
	C	6-8	29
	D	4-6	19
School 6	A	4	26
	B	4/5	24
	C	5/6	21
	D	4	18
School 7	A	4/5	26
	B	5-7	30
	C	7/8	28
School 8	A	4	26
	B	5/6	39
Total			736
IV. New Jersey			
A. Union City			
School 1	A	5	14
	B	6/7	20
	C	7/8	16
	D	4	20
School 2	A	6	19
	B	5	18
	C	4	14
School 3	A	7/8	20
Total			141
B. Vineland			
School 1	A	3/4	27
	B	4	20
School 2	A	7/8	16
	B	6	7
	C	5	7
Total			77
V. New York			
School 1	A	5	29
	B	6	18
School 2	A	5	21
	B	4	16
School 3	A	4/5	5
School 4	A	6	26
School 5	A	5/6	31
Total			146
VI. Pennsylvania			
A. Bethlehem			
School 1	A	4-6	22
School 2	A	4-6	11
School 3	A	4-5	8
Total			41

Detailed Sample Description by Site, School, and Grade Level (Cont'd)

Site	Class Code	Grade	N
VII. Texas			
A. Ben Bolt			
School 1	A	6	7
	B	7	8
Total			15
B. San Antonio			
School 1	A	4	22
School 2	A	6	21
School 3	A	5	21
School 4	A	6-8	17
School 5	A	4-5	18
	B	4	23
	C	5	26
School 6	A	4	29
	B	5	21
School 7	A	5	8
	B	4	23
Total			229
C. Weslaco			
School 1	A	5	33
	B	5/6	30
	C	6	34
Total			97
GRAND TOTAL			2,734

APPENDIX C

Arrangements for Data Collection

1. Confirming Letter
2. Field Study Description
3. Parents' Permission Form
   (Spanish and English)
4. Shipment Letter to Sites
5. Transmittal Form

Confirming Letter

Date

Address

Dear

It was a pleasure talking with you. As we discussed, we would be delighted to have the students and staff at your school participate in a pilot study to evaluate the usefulness of a Spanish edition of the Ranger Rick magazine published by the National Wildlife Federation.

The study would involve devoting one class period in November in one or more fourth through eighth-grade classes to using the Spanish version of an issue that National Wildlife has translated. The choice of content (which includes various short stories, articles, and games) and the procedure is entirely up to you and your staff. We would provide Spanish Ranger Rick magazines for all students and teachers participating in the study. In addition, each teacher would receive a guide with suggested activities in Spanish, each school would receive both the magazine and the guide in English.

A week later we would like participating students and teachers to complete a brief questionnaire describing how the magazine was used and their reactions to it. We would also like to obtain a brief evaluation of this Spanish issue from one or more other relevant individuals you identify such as yourself, an area coordinator, bilingual advisor, or parent.

You may wish to review the enclosed materials with your colleagues to decide what classes would be able to participate in the study. After selecting those classes to be in the study, I would appreciate your completing the enclosed form and returning it in the self-addressed envelope. If you should have any questions, please don't hesitate to write or call me (609-734-5556) or Mrs. Arleen Barron (609-734-1765) collect.

We very much appreciate your willingness to participate in this study. We look forward to our working together and hope by so doing to contribute to understanding how we might better serve our Nation's children.

Sincerely yours,

Virginia C. Shipman, Ph.D.
Senior Research Psychologist

VCS:ak
cc: Mrs. Arleen Barron
Enclosures

A Field Study on the Use of the

Ranger Rick's Magazine - Spanish Edition

The 1981 field study represents the interests of three organizations in instructional materials for students of Hispanic background who have limited English language ability. The National Science Foundation is supporting the project in line with its encouragement of efforts to minimize language barriers to the development of student interest, appreciation, and knowledge in the sciences. The National Wildlife Federation, as publisher of Ranger Rick's Magazine, wishes to extend the benefits of this widely acclaimed publication to those with little or no command of English, choosing Spanish speakers as the largest minority student population. And Educational Testing Service is evaluating the use, acceptability, and educational potential of the magazine in a variety of settings with large Hispanic student populations.

The April 1980 edition of Ranger Rick's Magazine was translated into Spanish and reviewed for vocabulary and language usage by native Spanish speakers from Puerto Rican and Mexican backgrounds. It is being sent, along with an Activity Guide in both English and Spanish, to schools that have agreed to participate in the study. There is no specific directive on how the materials are to be used so that teachers and school administrators will be free to incorporate the magazine and suggested activities into their classwork in ways most likely to achieve their own instructional goals. In fact, information on what section or sections were selected and the rationale for that selection is seen as an indication of how the materials are perceived by educator practitioners.

The purposes of the field study are described as follows:

- to evaluate the acceptance and use of an experimental Spanish edition of Ranger Rick,
- to identify the degree to which diverse groups of the Hispanic population react differently to the edition,
- to assess and analyze the extent to which the edition's content, reading level, format, and so on are appropriate for the intended audiences, and
- to collect and analyze recommendations from the field-test populations for the Spanish edition program materials and services.

The study sample represents the three major Hispanic groups in this country (Mexican American, Puerto Rican, and Cuban), grades four through eight, urban and rural localities, lower and middle income families, and several different regions.

Data will be collected from teachers, administrators, and students through mailed questionnaires and by both interviews and observation at a sample of the study sites.

The final report will provide a detailed description of the study procedures and findings, and a discussion of the implications of these findings for further research and development.

For additional information about the project contact:

National Wildlife Federation
1412 16th Street, N.W.
Washington, D.C. 20036

Gerald Bishop (703)790-4283
Managing Editor
Ranger Rick's Nature Magazine

Educational Testing Service
Princeton, N.J. 08541

Arleen S. Barron (609)734-1765
Program Administrator
Office for Minority Education

Virginia C. Shipman, Ph.D. (609)734-5556
Senior Research Psychologist
Center for Assessment and Research in
Human Development

EDUCATIONAL TESTING SERVICE PRINCETON, N.J. 08541

609-921-9000
CABLE EDUCTESTSVC
•
OFFICE FOR MINORITY EDUCATION

Apreciado Padre:

Necesitamos su permiso para que su hijo participe en un estudio para evaluar la edición española de la revista Ranger Rick's Nature Magazine.

National Wildlife Federation necesita saber si la edición española de la revista sería útil en nuestras escuelas y cómo podría ser mejorada. Para lograr este propósito necesitamos la reacción de su hijo hacia la revista. La clase de su hijo usará la edición española durante una lección. A cada niño se le dará una copia de la revista.

Se le pedirá a los niños que contesten preguntas e indiquen si les gustaron varias partes de la revista, cómo creen que se puede mejorar, y cuánto saben de español. Se recogerán las respuestas en forma anónima, y toda información personal será confidencial. Esto tomará solo 10 o 15 minutos de una clase. Se llevará a cabo una semana después de la presentación de la revista durante un tiempo que convenga a los estudiantes y a los maestros.

Las preguntas han sido revisadas por nuestro personal puertorriqueño y chicano, la Oficina Bilingue de Nueva York, y personal local.

Hay una gran necesidad de buen material para nuestros alumnos. Nosotros creemos que este estudio contribuirá al esfuerzo de crear nuevas fuentes para la enseñanza. Nosotros agradeceríamos su permiso para que su hijo participara en el estudio; sin embargo, la decisión sobre la participación de su hijo la toma Ud. Por favor complete el formulario adjunto indicando su decisión y entréguelo en la escuela de su hijo.

Sinceramente,

Virginia C. Shipman, Ph.D.

Por favor indique en la casilla correspondiente su decisión sobre la participación de su hijo en este proyecto. Firme este formulario y entréguelo en la escuela de su hijo.

☐ Apruebo

☐ Desapruebo

Firma______________________________

Fecha______________________________

EDUCATIONAL TESTING SERVICE ETS PRINCETON, N.J. 08541

609-921-9000
CABLE-EDUCTESTSVC
•
OFFICE FOR MINORITY EDUCATION

Dear Parent:

We need your permission for your child to take part in the review of the Spanish edition of the Ranger Rick's Nature Magazine.

National Wildlife Federation needs to find out if a Spanish edition of the magazine would be useful in schools and if so, how it can be improved. To do this we need your child's reaction to the magazine. Your child's class will be using the Spanish edition during one class period. Each student will be given a copy of the magazine to keep.

The children would be asked to answer questions about how much they liked or disliked various parts of the magazine, how they think it could be improved and how well they know Spanish. The children will not be asked to put their name on their answers, and all personal information will be kept confidential. This will only take about 10 or 15 minutes of a class period, and will take place approximately a week after the magazine is used in the classroom at a time most convenient for students and teachers.

The questions have been reviewed by our Puerto Rican and Chicano staff, the New York City Bureau of Bilingual Education, and local staff.

There is a great need for good instructional materials for our students and we believe this study will contribute to this effort. The decision as to whether your child will participate is yours. We would greatly appreciate your approval for your child to take part in this study. If you do not wish your child to participate, she/he will not be asked to answer the questions. Please complete the attached form indicating your decision and return it to your child's school.

Sincerely,

Virginia C. Shipman, Ph.D.

Please check one box indicating that you either approve or do not approve your child's participation in this project. Also, please sign this form and return it to your child's school.

☐ I Do Approve

☐ I Do Not Approve

Signature____________________

Date____________________

(OVER)

EDUCATIONAL TESTING SERVICE PRINCETON, N.J. 08541

609-921-9000
CABLE-EDUCTESTSVC
•
OFFICE FOR MINORITY EDUCATION

We have sent you a shipment of copies of the Ranger Rick magazine. Enclosed here are additional materials:

Student Questionnaires in Spanish
Student Questionnaires in English
Teacher Questionnaires
School Questionnaires
Activity Guides in Spanish
Activity Guides in English
Class Transmittal Form(s)
1st Class Self-Addressed Envelope(s)

The questionnaires should be completed a week after the class period when the Ranger Rick's Nature Magazine was used. Since the field study data will be analyzed by classes will you please have the completed questionnaires assembled for return separately by class (i.e., student questionnaires, teacher questionnaire(s), and a copy of the enclosed transmittal form) and send to ETS in the prepaid self-addressed mailer.

The questionnaires completed by one or more representatives of the school and/or your office can be included in a class package.

We hope that your teachers and students will enjoy the experience and look forward to receiving your reactions. Please be assured that the information will be confidential; the study reports will not identify students, classes, or personnel. Meanwhile, if you have questions or need more materials please call me at (609) 734-1765.

Sincerely yours,

(Mrs.) Arleen S. Barron
Program Administrator

ASB:mt
Enclosures

RANGER RICK FIELD STUDY

Class Transmittal Form

For each class participating in the Ranger Rick field study please provide the information requested below and attach it to the package of student questionnaires and teacher(s) questionnaire(s) for that class. A prepaid ETS return mailer has been provided for your convenience.

School:____ Grade:_______________

Number of questionnaires attached: __________

Student_______ Teacher_________

Date of the class session devoted to Ranger Rick's Nature Magazine: _____________

Was the magazine used in a regular class session?________

If yes, what?____

____

____

If it was by special arrangement, please describe:________________________

____

____

Are the students part of a regular program to develop English language skills? If so what kind of program?

_________ESL

_________Bilingual

_________Transitional

_________Other: Please specify________________________________

____

____

We hope that you have enjoyed your participation in the Ranger Rick field study. Our sincerest thanks for your cooperation.

APPENDIX D

Student Questionnaire Code List

RANGER RICK

STUDENT QUESTIONNAIRE CODE LIST

B

Other Parts?
7b. In Class
8b. Outside of school
9b. Discussed parts

a. April Fooler
b. Search for Supersaurus
c. Backyard Dinosaurs?
d. Build a Boxosaurus
e. Wise Old Owl
f. Ollie Otter's Fun Pages, Puzzles
g. Sense and Nonsense about Hedgehogs
h. Sea Poems
i. Ranger Rick & His Friends
j. Happy Bee
k. Nature Club News
l. Green Velvet Princess
m. Nature Did It First
n. Dear Ranger Rick
o. Ranger Rick's Rare Wonders
p. Diatoms
q. Piper Grows Up
r. Animals
s. Vague, other
t. Science

C

What Activities?
7c. In class
8c. Outside of school

a. Build Boxosaurus, Dinosaur, Solar model
b. Read
c. Games, puzzles
d. Draw
e. Research/investigate/encyclopedia/expt.
f. Write report, story, etc.
g. Vague, other

D

10. What did you learn?

n. Conservation
o. Story facts
p. Nature/animals
q. Personal relation
r. Science methods
s. Motivation
t. Science
u. Spanish
v. Poems
w. Build a dinosaur
x. New words
y.
z. Vague, other

T. Title or topic

E

11/12. Liked most/least (used a through q from column B and r to z listed below

r. Variety
s. Pictures, drawings
t. Spanish
u. Activities
v. Stories/articles
w. Vocabulary
x. Animals
y. Science
z. Vague, other

F

14. Different from others?

a. Interesting/entertaining
b. Use of stories
c. Specific article
d. Lessons
e. Liked it/well done, good
f. Animal stories
g. In Spanish
h. Pictures, drawings
i. Variety
j. Activities, puzzles
k. Easy to read, understand
l. Research material
m. Utility
n. Informative
o. Different, specific
p. New ways/things
q. Attractive/colors
r. Size
s. Ranger Rick
t. Vague, other
u. Science
v. Title
w. Vocabulary

G

16. Change how?

a. Specific page
b. Bigger
c. Pictures, Drawings
d. Specific article
e. Games, puzzles
f. Easier
g. Poems
h. More interesting
i. More stories
j. More on animals
k. Span. to Eng.
l. More variety
m. Make harder
n. Vague, other

15C. Where would you like to use?

a. Other
b. Park
c. Library
d. Beach
e. Other's house
f. Bus
g. Trips
h. Zoo